

# **Service Manual**

## **ViewSonic VX2235wm-3**

**Model No. VS11446**

**22" Color TFT LCD Display**

(VX2235wm-3\_SM Rev. 1a Nov. 2006)

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# **Revision History**

| <b>Revision</b> | <b>SM Editing Date</b> | <b>ECR Number</b> | <b>Description of Changes</b> | <b>Editor</b> |
|-----------------|------------------------|-------------------|-------------------------------|---------------|
| 1a              | 11/13/2006             |                   | Initial Release               | Jamie Chang   |
|                 |                        |                   |                               |               |
|                 |                        |                   |                               |               |
|                 |                        |                   |                               |               |
|                 |                        |                   |                               |               |
|                 |                        |                   |                               |               |
|                 |                        |                   |                               |               |

## **TABLE OF CONTENTS**

|  |           |
|--|-----------|
| <b>1. Precautions and Safety Notices</b>           | <b>1</b>  |
| <b>2. Specification</b>                            | <b>3</b>  |
| <b>3. Front Panel Function Control Description</b> | <b>8</b>  |
| <b>4. Circuit Description</b>                      | <b>14</b> |
| <b>5. Adjusting Procedure</b>                      | <b>20</b> |
| <b>6. Trouble Shooting Flow Chart</b>              | <b>34</b> |
| <b>7. Block Diagrams</b>                           | <b>37</b> |
| <b>8. Schematic Diagrams</b>                       | <b>38</b> |
| <b>9. PCB Layout Diagrams</b>                      | <b>47</b> |
| <b>10. Exploded Diagram And Spare Parts List</b>   | <b>52</b> |
| <b>11. Recommended Spare Parts List</b>            | <b>56</b> |

# 1. Precautions and Safety Notices

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## 1. Appropriate Operation

- (1) Turn off the product before cleaning.
- (2) Use only a dry soft cloth when cleaning the LCD panel surface.
- (3) Use a soft cloth soaked with mild detergent to clean the display housing.
- (4) Disconnect the power plug from AC outlet if the product is not used for a long period of time.
- (5) If smoke, abnormal noise, or strange odor is present, immediately switch the LCD display off.
- (6) Do not touch the LCD panel surface with sharp or hard objects.
- (7) Do not place heavy objects on the LCD display, video cable, or power cord.
- (8) Do not use abrasive cleaners, waxes or solvents for your cleaning.
- (9) Do not operate the product under the following conditions:
  - Extremely hot, cold or humid environment.
  - Areas susceptible to excessive dust and dirt.
  - Near any appliance generating a strong magnetic field.
  - Place in direct sunlight.

## 2. Caution

No modification of any circuit should be attempted. Service work should only be performed after you are thoroughly familiar with all of the following safety checks and servicing guidelines.

## 3. Safety Check

Care should be taken while servicing this LCD display. Because of the high voltage used in the inverter circuit, the voltage is exposed in such areas as the associated transformer circuits.

## 4. Power Supply Requirements

The external AC power operating range shall be from 90 to 264Vac






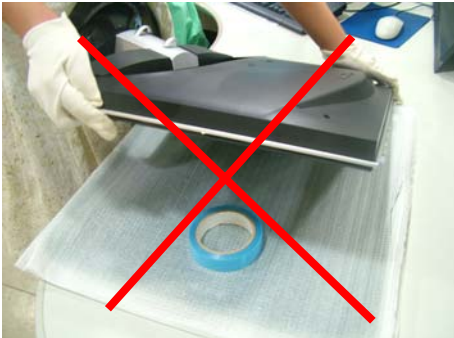

## 5. LCD Module Handling Precautions

### 5.1. Handling Precautions





- (1) Since front polarizer is easily damaged, pay attention not to scratch it.
- (2) Be sure to turn off power supply when inserting or disconnecting from input connector.
- (3) Wipe off water drop immediately. Long contact with water may cause discoloration or spots.
- (4) When the panel surface is soiled, wipe it with absorbent cotton or other soft cloth.
- (5) Since the panel is made of glass, it may break or crack if dropped or bumped on hard surface.
- (6) Since CMOS LSI is used in this module, take care of static electricity and insure human earth when handling.
- (7) Do not open nor modify the Module Assembly.
- (8) Do not press the reflector sheet at the back of the module to any directions.
- (9) In case if a Module has to be put back into the packing container slot after once it was taken out from the container, do not press the center of the CCFL Reflector edge. Instead, press at the far ends of the CFL Reflector edge softly. Otherwise the TFT Module may be damaged.
- (10) At the insertion or removal of the Signal Interface Connector, be sure not to rotate nor tilt the Interface Connector of the TFT Module.
- (11) After installation of the TFT Module into an enclosure (LCD monitor housing, for example), do not twist nor bend the TFT Module even momentarily. At designing the enclosure, it should be taken into consideration that no bending/twisting forces are applied to the TFT Module from outside. Otherwise the TFT Module may be damaged.
- (12) Cold cathode fluorescent lamp in LCD contains a small amount of mercury. Please follow local ordinances or regulations for disposal.
- (13) Small amount of materials having no flammability grade is used in the LCD module. The LCD module should be supplied by power complied with requirements of Limited Power Source (IEC60950 or UL1950), or be applied exemption.
- (14) The LCD module is designed so that the CFL in it is supplied by Limited Current

Circuit (IEC60950 or UL1950). Do not connect the CFL in Hazardous Voltage Circuit.

## 5.2. Handling and Placing Methods

| Correct Methods:  | Incorrect Methods:  |
|---|---|
| Only touch the metal frame of the LCD panel or the front cover of the monitor. Do not touch the surface of the polarizer. | Surface of the LCD panel is pressed by fingers and that may cause "Mura"  |
|    |   |
|   |    |
| Place the monitor on a clean and soft foam pad.   | Placing the monitor on foreign objects. That could scratch the surface of the panel or cause "Mura"   |
|                                        |   |
|   | <p data-bbox="823 1608 1372 1664">The panel is placed facedown on the lap. That may cause "Mura"</p>  |

## 2. Specification

| FEATURES  |   | VX2235wm-3                 |
|---|---|----------------------------|
| TFTLCD PANEL<br>1 <sup>st</sup><br>AUO<br>M220EW01 V0 | Size  | 22 " wide                  |
|   | Luminance (Typ)   | 300 cd/m <sup>2</sup>      |
|   | Contrast Ratio (Typ)  | 900:1                      |
|   | Colors  | 16.7 M (8bits RGB)         |
|   | Response Time   | 5 ms(on/off)               |
|   | Viewing Angle (H/V)   | 170 ° / 160 °              |
|   | Recommend resolution  | 1680x1050@60Hz             |
| Input Signal  | Analog  | Yes (75ohms, 0.7/1.0 Vp-p) |
|   | Digital   | Yes                        |
| Sync Compatibility                                    | Separate Sync   | Yes                        |
|   | Composite Sync  | Yes                        |
|   | Sync on Green   | Yes                        |
| Compatibility   | PC  | Yes                        |
|   | Power Mac   | Yes                        |
|   | TV Box (NextVision 6)   | Yes                        |
| Power Voltage   | AC 100-240V, 50/60Hz  | Yes                        |
| Power Consumption                                     | On Mode(Typ)  | < 48 W                     |
|   | Off Mode (Max)  | ≤ 1 W                      |
| Audio   | 2.5W / THD 10% (Max)  | Yes                        |
| Ergonomics  | Tilt ( 20 ° - -5 ° )  | Yes                        |
|   | Swivel  | No                         |
|   | Pivot   | No                         |
|   | Height Adjust   | No                         |
| OSD Control   | [ 1 ] [ 2 ] [  ] [  ] [  ] [  ] | Yes                        |
| Dimension   | Physical (W x H x D)  | 528 x 483 x 244 mm         |
|   | Package (W x H x D)   | 575 x 535x 172mm           |
| Weight  | Physical (Net Weight)   | 6.8Kg / 15 lbs             |
|   | Package (Gross Weight)  | 9.2Kg / 20.3 lbs           |
| Operating Condition                                   | Temperature (°F/°C)   | 32°F -104°F / 0°C -40°C    |
|   | Humidity (%)  | 20% - 90%                  |
| Storage Condition                                     | Temperature (°F/°C)   | -4°F -140°F / -20°C - 60°C |
|   | Humidity (%)  | 10% - 90%                  |
| Regulation  | Global: CB, MPR II, WEEE, ROHS , ISO13406-2<br>VSA:UL, cUL, FCC-B, TUV-S, NOM, Energy Star<br>VSE:TUV/ERGO(covers ISO13406-2&MPR II),CE<br>GOST-R+Hygienic ,SASO , ENERGY<br>VSI: BSMI, CCC, PSB, C-TICK, MIC<br>VSCN:CCC   |                            |

### 4-1 GENERAL specification

|                                  |   |
|----------------------------------|---|
| Test Resolution & Frequency      | 1680x1050 @ 60Hz                                      |
| Test Image Size                  | Full Size   |
| Contrast and Brightness Controls | Factory Default:<br>Contrast = 70%, Brightness = 100% |

### 4-2 VIDEO INTERFACE

|                                     |  |
|-------------------------------------|--|
| Analog Input Connector              | DB-15 (Analog), refer the appendix A   |
| Digital Input Connector             | DVI-D(Digital), refer the appendix B   |
| Default Input Connector             | Defaults to the first detected input   |
| Video Cable Strain Relief           | Equal to twice the weight of the monitor for five minutes                            |
| Video Cable Connector DB-15 Pin out | Compliant DDC 1/2B   |
| Video Signals                       | 1. Video RGB (Analog)<br>Separate, Composite, and Sync on Green<br>2. TMDS (Digital) |
| Video Impedance                     | 75 Ohms (Analog), 100 Ohms (Digital)   |
| Maximum PC Video Signal             | 950 mV with no damage to monitor   |
| Maximum Mac Video Signal            | 1250 mV with no damage to monitor  |

|                          |   |
|--------------------------|---|
| Sync Signals             | TTL   |
| DDC 1/2B                 | Compliant with Revision 1.3   |
| Sync Compatibility       | Separate Sync, Composite Sync, SOG  |
| Video Compatibility      | Shall be compatible with all PC type computers, Macintosh computers, and after market video cards   |
| Resolution Compatibility | 640 x 350*, 640 x 480, 720 x 400* (640 x 400*), 800 x 600, 832 x 624, 1024 x 768, 1152 x 864, 1152 x 870, 1280 x 720, 1280 x 960, 1280 x 1024, 1400 x 1050, 1440 x 900, 1600 x 1200, 1680 x 1050<br><br>* The image vertical size might not be full screen.<br>But the image vertical position should be at the center. |
| Exclusions               | Not compatible with interlaced video  |

### 4-3 POWER SUPPLY

|                                     |   |
|-------------------------------------|---|
| Internal Power Supply               | Part Number: HJC- H0AU032001  |
| INPUT VOLTAGE RANGE                 | AC100~240 (WORLDWIDE)   |
| Input Frequency Range               | 47 TO 63 HERTZ  |
| Short Circuit Protection            | Output can be shorted without damage  |
| Over Current Protection             | 5A TYPICAL AT 5 VDC ( Protect when short circuit )  |
| Leakage Current                     | 3.5mA (Max) at 264VAC / 50Hz  |
| EFFICIENCY                          | 80 % typical at 115VAC Full Load<br>75% minimum at 115VAC Full Load   |
| Fuse                                | Internal and not user replaceable   |
| Power Dissipation                   | < 48 Watts (typ)  |
| Max Input AC Current                | 1.5Arms @ 90VAC , 0.75Arms@ 180VAC  |
| INRUSH CURRENT (COLD START)         | 50A MAX./ 115V <sub>AC</sub> / 60HZ (COLD START AT 25°C, FULL LOAD)<br>90A MAX./ 230V <sub>AC</sub> / 50HZ (COLD START AT 25°C, FULL LOAD)  |
| Power Supply Cold Start             | Shall start and function properly when under full load, with all combinations of input voltage, input frequency, and operating temperature  |
| Power Supply Transient Immunity     | Shall be able to withstand an ANSI/IEEE C62.41-1980 6000V 200 ampere ring wave transient test with no damage  |
| Power Supply Line Surge Immunity    | Shall be able to withstand 1.5 times nominal line voltage for one cycle with no damage  |
| Power Supply Missing Cycle Immunity | Shall be able to function properly, without reset or visible screen artifacts, when ½ cycle of AC power is randomly missing at nominal input  |
| Power Supply Acoustics              | The power supply shall not produce audible noise that would be detectable by the user. Audible shall define to be in compliance with ISO 7779 (DIN EN27779:1991) Noise measurements of machines acoustics. Power Switch noise shall not be considered |
| US Type Power Cable                 | Separate 3-prong NEMA 5-15P type plug. Length = 1.8m. Connects to display.<br>Color = Black   |
| European Type Power Cable           | Schuko CEE7-7 type plug.<br>Length = 1.8m, Connects to display.<br>Color = Black  |
| CCC Type Power Cable                | Separate 3-prong type plug.<br>Length = 1.8m. Connects to display.<br>Color = Black   |
| PSE Type Power Cable                | Separate 2-prong NEMA 1-15P type plug. Length = 1.8m. Connects to display.<br>Color = Black   |
| Power Saving Operation(Method)      | VESA DPMS Signaling   |
| Power Consumption                   | On Mode- W/O Audio < 43W (Typ) / 48W (Max)<br>On Mode- W/Audio < 50W (Typ) / 55W (Max)<br>Saving Mode < 2 W@230VAC 50HZ<br>Off Mode < 1 W @230VAC 50Hz<br>(DC Power Off; Meet to Energy Star Ver4.0 Tier2)  |
| Recovery Time                       | On Mode = N/A, Active Off < 3 sec   |

#### 4-4 ELECTRICAL REQUIREMENT

##### Horizontal / Vertical Frequency

|                       |                               |
|-----------------------|-------------------------------|
| Horizontal Frequency  | 24 – 82 KHz                   |
| Vertical Refresh Rate | 50 – 85* HZ                   |
| Maximum Pixel Clock   | 170 MHz                       |
| Sync Polarity         | Independent of sync polarity. |

**Timing Table**

| Item | Timing     |   |        |          | Analog    |           |     | Digital - TMDS | Remark   |
|------|------------|---|--------|----------|-----------|-----------|-----|----------------|--|
|      |            |   |        |          | Separated | Composite | SOG |                |  |
| 1    | 640 x 350  | @ | 70 Hz, | 31.5 KHz |           |           |     |                | For Analog sync, OSD will be 640x350/640x400/720x400 (primary= 720x400).                                   |
| 2    | 640 x 350  | @ | 85 Hz, | 37.9 KHz |           |           |     |                | For Analog sync, OSD will be 640x350/640x400/720x400 (primary= 720x400).                                   |
| 3    | 640 x 400  | @ | 60 Hz, | 31.5 KHz |           |           |     |                | For Analog sync, switch 640x400@60Hz and 640x480@60Hz by [1]+[2] short cut key (primary = 640x480@60Hz)    |
| 4    | 640 x 400  | @ | 70 Hz, | 31.5 KHz |           |           |     |                | For Analog sync, OSD will be 640x350/640x400/720x400 (primary= 720x400).                                   |
| 5    | 640 x 400  | @ | 85 Hz, | 37.9 KHz |           |           |     |                | For Analog sync, OSD will be 640x350/640x400/720x400 (primary= 720x400).                                   |
| 6    | 640 x 480  | @ | 50 Hz, | 24.7 KHz |           |           |     |                |  |
| 7    | 640 x 480  | @ | 60 Hz, | 31.5 KHz |           |           |     |                | For Analog sync, switch 640x400@60Hz and 640x480@60Hz by [1]+[2] short cut key (primary = 640x480@60Hz)    |
| 8    | 640 x 480  | @ | 67 Hz, | 35 KHz   |           |           |     |                |  |
| 9    | 640 x 480  | @ | 72 Hz, | 37.9 KHz |           |           |     |                |  |
| 10   | 640 x 480  | @ | 75 Hz, | 37.5 KHz |           |           |     |                |  |
| 11   | 640 x 480  | @ | 85 Hz, | 43.3 KHz |           |           |     |                |  |
| 12   | 720 x 400  | @ | 70 Hz, | 31.5 KHz |           |           |     |                | For Analog sync, OSD will be 640x350/640x400/720x400 (primary= 720x400).                                   |
| 13   | 720 x 400  | @ | 85 Hz, | 37.9 KHz |           |           |     |                | For Analog sync, OSD will be 640x350/640x400/720x400 (primary = 720x400).                                  |
| 14   | 720 x 480  | @ | 60 Hz, | 31.5 KHz |           |           |     |                | For Analog sync, information OSD shows 640x480   |
| 15   | 720 x 576  | @ | 50 Hz, | 31.3 KHz |           |           |     |                | For Analog sync, information OSD shows 800x600   |
| 17   | 800 x 600  | @ | 56 Hz, | 35.1 KHz |           |           |     |                |  |
| 18   | 800 x 600  | @ | 60 Hz, | 37.9 KHz |           |           |     |                |  |
| 19   | 800 x 600  | @ | 72 Hz, | 48.1 KHz |           |           |     |                |  |
| 20   | 800 x 600  | @ | 75 Hz, | 46.9 KHz |           |           |     |                |  |
| 21   | 800 x 600  | @ | 85 Hz, | 53.7 KHz |           |           |     |                |  |
| 22   | 832 x 624  | @ | 75 Hz, | 49.7 KHz |           |           |     |                |  |
| 23   | 1024 x 768 | @ | 50 Hz, | 39.6 KHz |           |           |     |                | For Analog sync, Switch 1024x768@50Hz and 1280x768@50Hz by [1]+[2] short cut key (primary = 1024x768@50Hz) |
| 24   | 1024 x 768 | @ | 60 Hz, | 48.4 KHz |           |           |     |                |  |
| 25   | 1024 x 768 | @ | 70 Hz, | 56.5 KHz |           |           |     |                |  |
| 26   | 1024 x 768 | @ | 75 Hz, | 60 KHz   |           |           |     |                |  |
| 27   | 1024 x 768 | @ | 75 Hz, | 60.2 KHz |           |           |     |                |  |
| 28   | 1024 x 768 | @ | 85 Hz, | 68.7 KHz |           |           |     |                |  |
| 29   | 1152 x 864 | @ | 75 Hz, | 67.5 KHz |           |           |     |                |  |
| 30   | 1152 x 870 | @ | 75 Hz, | 68.7 KHz |           |           |     |                |  |
| 32   | 1280 x 768 | @ | 50 Hz, | 39.6 KHz |           |           |     |                | For Analog sync, Switch 1024x768@50Hz and 1280x768@50Hz by [1]+[2] short cut key (primary = 1024x768@50Hz) |
| 33   | 1280 x 768 | @ | 60 Hz, | 47.4 KHz |           |           |     |                |  |
| 34   | 1280 x 768 | @ | 60 Hz, | 47.8 KHz |           |           |     |                |  |
| 35   | 1280 x 768 | @ | 75 Hz, | 60.3 KHz |           |           |     |                | For Analog sync, Switch 1024x768@75Hz and  |



|    |             |   |        |      |     |  |
|----|-------------|---|--------|------|-----|--|
|    |             |   |        |      |     | 1280x768@75Hz by [1]+[2] short cut key (primary = 1024x768@75Hz)   |
| 36 | 1280 x 768  | @ | 85 Hz, | 68.6 | KHz | For Analog sync, Switch 1024x768@85Hz and 1280x768@85Hz by [1]+[2] short cut key (primary = 1024x768@85Hz)     |
| 37 | 1280 x 960  | @ | 50 Hz, | 49.4 | KHz |  |
| 38 | 1280 x 960  | @ | 60 Hz, | 59.7 | KHz |  |
| 39 | 1280 x 960  | @ | 75 Hz, | 75.2 | KHz |  |
| 40 | 1280 x 1024 | @ | 50 Hz, | 52.7 | KHz |  |
| 41 | 1280 x 1024 | @ | 60 Hz, | 64   | KHz |  |
| 42 | 1280 x 1024 | @ | 70 Hz, | 74.6 | KHz |  |
| 43 | 1280 x 1024 | @ | 72 Hz, | 76.8 | KHz |  |
| 44 | 1280 x 1024 | @ | 75 Hz, | 80   | KHz |  |
| 45 | 1360 x 768  | @ | 60 Hz, | 47.7 | KHz |  |
| 46 | 1400 x 1050 | @ | 50 Hz, | 54.1 | KHz |  |
| 47 | 1400 x 1050 | @ | 60 Hz, | 64.7 | KHz |  |
| 48 | 1400 x 1050 | @ | 60 Hz, | 65.3 | KHz | For analog sync,, Switch 1400x1050@60Hz and 1680x1050@60Hz by [1]+[2] short cut key (primary = 1680x1050@60Hz) |
| 49 | 1400 x 1050 | @ | 75 Hz, | 82.3 | KHz |  |
| 50 | 1440 x 900  | @ | 60 Hz, | 55.5 | KHz |  |
| 51 | 1440 x 900  | @ | 60 Hz, | 59.9 | KHz |  |
| 52 | 1440 x 900  | @ | 75 Hz, | 75   | KHz |  |
| 53 | 1600 x 1200 | @ | 60 Hz, | 75   | KHz |  |
| 55 | 1680 x 1050 | @ | 60 Hz, | 65.3 | KHz | For analog sync,, Switch 1400x1050@60Hz and 1680x1050@60Hz by [1]+[2] short cut key (primary = 1680x1050@60Hz) |

\*1. Tolerance  $\geq \pm 2\text{KHz}$ . (if the range dose not cover other timing mode)

\*2. Any timing not in the list, it should display as normal or show on "OUT OF RANGE" OSD message with blanking.

\*3. The image quality of 85Hz mode might be worse than 75Hz.

### Main Menu Controls

Auto Image Adjust\*<sup>1</sup>

Contrast/Brightness\*<sup>2\*4</sup>

Input Select

Analog, Digital

Audio Adjust

Volume\*<sup>4</sup>, Mute\*<sup>4</sup>

Color Adjust

SRGB, 9300K, 7500K, 6500K(default), 5400, User Color [R, G, B]

Information [H Frequency, V Frequency, Resolution, Pixel Clock, Serial Number, Model Number,

[[www.ViewSonic.com](http://www.ViewSonic.com)"]

Manual Image Adjust

Horizontal Size\*<sup>1</sup>, H/V. Position\*<sup>1</sup>, Fine Tune\*<sup>1</sup>, Sharpness\*<sup>3</sup>, Opticolor [Standard, Text, Cinema, Game, Portrait, Scenery, Vivid], Opticolor Skin Tone[Nature, reddish, yellowish]

Setup Menu

Language [English, French, German, Italian, Spanish, Finnish, Japanese, Simplified Chinese, Traditional Chinese], Resolution Notice, OSD Position, OSD Timeout, OSD Background

MEMORY RECALL

\*<sup>1</sup> These functions are not available in Digital Mode

\*<sup>2</sup> These functions are not available under SRGB Mode, Opticolor On, and Opticolor Skin Tone On

\*<sup>3</sup> These functions are not available under Native Resolution Mode

\*<sup>4</sup> These functions setting can be recalled to default value by pressing [▼]+[▲]

[Remark] Please refer to the detail in the Appendix C

### Function descriptions

#### OSD Lock short cuts function for the buttons

The OSD lock will be activated by pressing the front panel control buttons "(1), & (▲)" for 10 seconds. If the user then tries to access the OSD by pressing any of the buttons "1", "▼", "▲", "2" a message will appear on the screen for 3 seconds showing "OSD Locked". The OSD lock will be deactivated by pressing the front panel control buttons "(1), & (▲)" again for 10 seconds.

Note1: When the OSD is locked will lock all functions, including “Volume” and “Mute”  
 Note 2: Status bar indicating OSD Lock or Unlock is in progress and when complete it will indicate “OSD Locked”  
 Note 3: OSD Lock should not lock Power Button and Power Lock function

#### 4-6 AUDIO INTERFACE (SPEAKER SPECIFICATION)

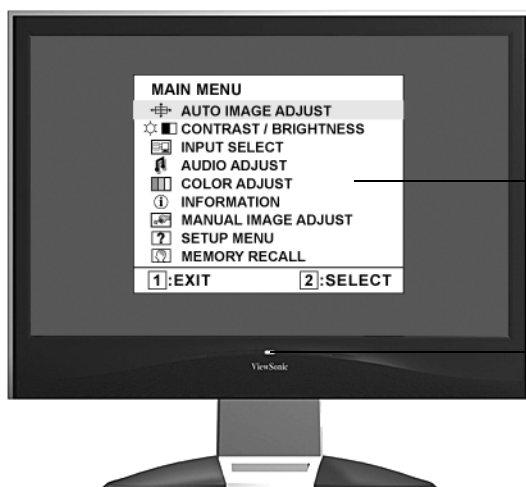
|                                     |  |
|-------------------------------------|--|
| Line input signal                   | 1.0 Vrms @1kHz   |
| Line input impedance                | 10 kOhm  |
| Maximum Amp power output (Watt)     | 2 W (RL=4Ω)  |
| Amp -THD                            | < 5 % THD @1kHz  |
| Speaker Power rating(Ω/Watt)        | 4Ω/2.5 W (typ.) ; 4Ω/ 3 W (max)  |
| Signal to Noise Ratio               | 72 dB  |
| Frequency response                  | 100 – 20kHz  |
| SPL.                                | 85± 3 dB   |
| Line input connection               | 3.5 mm stereo jacks  |
| Vibration                           | There should be no audible vibration resonance at volume=100% & treble / bass in def. Value  |
| Screen image                        | There should be no affect on the screen image stability under any conditions   |
| Connector PC99 requirement Audio in | Lime Green pantone # 577C  |
| Cable type / length                 | 3.5mm stereo cable / 1.8m length   |
| Audio DPMS                          | Speakers stay off when the rest of the monitor is in power saving<br>Note: There is no guarantee <1 W at power consumption in Active Off mode, when the Audio Cable is connected |

#### 4-7 TFT LCD PANEL

##### 1<sup>st</sup> Source Panel

|   |  |
|---|--|
| Model number  | AUO M220EW01 V0  |
| Type  | TN type with LVDS interface  |
| Active Size   | 22” wide ; 473.76 (H) x 296.1 (V)  |
| Pixel Arrangement   | RGB Vertical Stripe  |
| Pixel Pitch   | 0.282(H) x 0.282(H) mm   |
| GLASS TREATMENT   | Anti Glare (Hard coating 3H)   |
| # OF BACKLIGHTS   | 4 CCFL ; Top & Bottom edge side  |
| BACKLIGHT LIFE  | 40,000 Hours (Min)   |
| Luminance (5-point) –<br>Condition:<br>CT = 6500K, Contrast = Max, Brightness = Max | 300 cd/m2 (Typ after 30 minute warm up)<br>250 cd/m2 (Min after 30 minute warm up) |
| Brightness Uniformity   | 80% (typ) ;75% (min)   |
| Contrast Ratio  | 900:1 (typ), 700:1 (min)   |
| Color Depth   | 16.7 million colors (8bits)  |
| Viewing Angle (Horizontal)  | @ CR>10<br>Typical: 170°<br>Minimum: 160°  |
| Viewing Angle (Vertical)  | @ CR>10<br>Typical: 160°<br>Minimum: 150°  |
| Response Time<br>10%-90% @ Ta=25°C  | Typical = 5ms (Tr =3.6 ms,Tf=1.4 ms)<br>Maximum = 8ms (Tr =5.7 ms,Tf=2.3 ms)       |
| Panel Defects   | Please see Panel Quality Specifications.   |

### 3. Front Panel Function Control Description



**Main Menu**  
with OSD controls

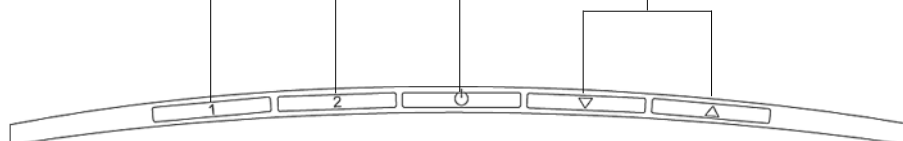
**Front Control Panel**  
shown below in detail

Displays the control screen for  
the highlighted control.  
Also toggles between two  
controls on some screens.  
Also a shortcut to Auto Image  
Adjust.

Displays the Main  
Menu or exits the  
control screen and  
saves adjustments.

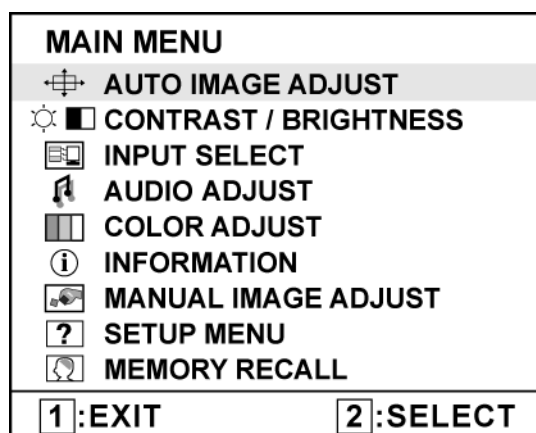
Standby Power On/Off  
Power light  
Blue = ON  
Orange = Power Saving

Scrolls through menu  
options and adjusts the  
displayed control.  
Also a shortcut to display  
the Contrast adjustment  
control screen (▼) /  
OptiColor (▲)



## Do the following to adjust the display setting:

1. To display the Main Menu, press button [1].



**NOTE:** All OSD menus and adjustment screens disappear automatically after about 15 seconds. This is adjustable through the OSD timeout setting in the setup menu.

2. To select a control to adjust, press ▲ or ▼ to scroll up or down in the Main Menu.
3. After the desired control is selected, press button [2]. A control screen like the one shown below appears.



The command line at the bottom of the control screen tells what to do next from this screen. You can toggle between control screens, adjust the selected option, or exit the screen.





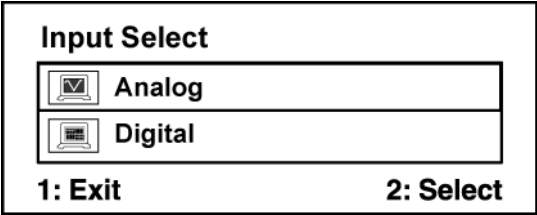


4. To adjust the setting, press the up ▲ or down ▼ buttons.
5. To save the adjustments and exit the menu, press button [1] *twice*.

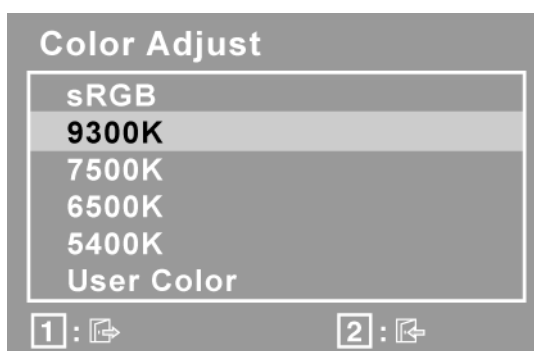
## The following tips may help you optimize your display:

- Adjust the computer's graphics card so that it outputs a 1680 x 1050 @ 60Hz video signal to the LCD display. (Look for instructions on “changing the refresh rate” in the graphics card's user guide.)
- If necessary, make small adjustments using H. POSITION and V. POSITION until the screen image is completely visible. (The black border around the edge of the screen should barely touch the illuminated “active area” of the LCD display.)

# Main Menu Controls

Adjust the menu items shown below by using the up ▲ and down ▼ buttons.

| Control   | Explanation  |
|---|--|
|    | <b>Auto Image Adjust</b> sizes and centers the screen image automatically.   |
|    | <b>Contrast</b> adjusts the difference between the image background (black level) and the foreground (white level).  |
|    | <b>Brightness</b> adjusts background black level of the screen image.  |
|    | <b>Input Select</b> toggles between inputs if you have more than one computer connected to the VX2235wm.   |
|   |    |
|  | <b>Audio Adjust</b><br><b>Volume</b> increases the volume, decreases the volume, and mutes the audio.<br><b>Mute</b> temporarily silences audio output.  |
|  | <b>Color Adjust</b> provides several color adjustment modes, including preset color temperatures and a User Color mode which allows independent adjustment of red (R), green (G), and blue (B). The factory setting for this product is 6500K (6500 Kelvin). |



**sRGB**-This is quickly becoming the industry standard for color management, with support being included in many of the latest applications. Enabling this setting allows the LCD display to more accurately display colors the way they were originally intended. Enabling the sRGB setting will cause the Contrast and Brightness adjustments to be disabled.

**9300K**-Adds blue to the screen image for cooler white (used in most office settings with fluorescent lighting).

**7500K** - Adds blue to the screen image for cooler white (used in most office settings with fluorescent lighting).

**6500K**-Adds red to the screen image for warmer white and richer red.

**5400K**-Adds green to the screen image for a darker color.

**User Color** Individual adjustments for red (R), green (G), and blue (B).

1. To select color (R, G or B) press button [2].

2. To adjust selected color, press▲and▼.

**Important:** If you select RECALL from the Main Menu when the product is set to a Preset Timing Mode, colors return to the 6500K factory preset.



**Information** displays the timing mode (video signal input) coming from the graphics card in the computer, the LCD model number, the serial number, and the ViewSonic® website URL. See your graphics card's user guide for instructions on changing the resolution and refresh rate (vertical frequency).



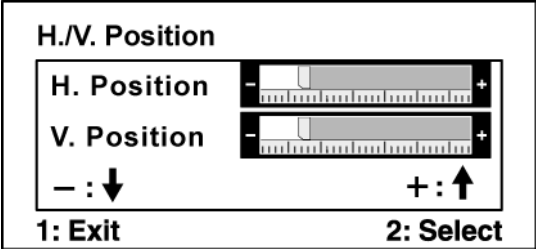




**NOTE:** VESA 1680 x 1050 @ 60Hz (recommended) means that the resolution is 1680 x 1050 and the refresh rate is 60 Hertz.

| Information                  |            |         |
|------------------------------|------------|---------|
| H. Frequency:                | XX         | kHz     |
| V. Frequency:                | XX         | Hz      |
| Resolution:                  | XXX        |         |
| Pixel Clock:                 | XXXXXXXXXX | MHz     |
| Serial Number: XXXXXXXXXXXXX |            |         |
| Model Number: XXXXXXXXXXXXX  |            |         |
| www.ViewSonic.com            |            | 1: Exit |



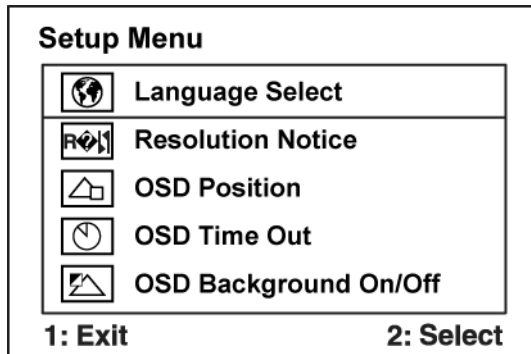
## Manual Image Adjust

| Manual Image Adjust |                     |
|---------------------|---------------------|
|                     | Horizontal Size     |
|                     | H./V. Position      |
|                     | Fine Tune           |
|                     | Sharpness           |
|                     | OptiColor Mode      |
|                     | OptiColor Skin Tone |
| 1: Exit 2: Select   |                     |

| Control   | Explanation   |
|---|---|
|    | <b>Horizontal Size</b> adjusts the width of the screen image.   |
|    | <b>H./V. Position (Horizontal/Vertical Position)</b> moves the screen image left or right and up or down.   |
|   |    |
|    | <b>Fine Tune</b> sharpens the focus by aligning text and/or graphics with pixel boundaries.<br><b>NOTE:</b> Try Auto Image Adjust first.  |
|    | <b>Sharpness</b> adjusts the clarity and focus of the screen image.   |
|  | <b>OptiColor Mode</b> provides an optimum display environment depending on the contents displayed. It contains 7 user-selectable presets. These 7 presets are easily accessible from the short cut keys.            |
|   | <b>Standard</b> is for general windows environment and monitor default setting.   |
|   | <b>Text</b> optimized for text editing and viewing in a word processing environment.  |
|   | <b>Cinema</b> optimized for movie and video environment.  |
|   | <b>Game</b> optimized for PC/TV game environment.   |
|   | <b>Portrait</b> optimized for displaying indoor portraits and enhancing pictures.   |
|   | <b>Scenery</b> optimized for displaying outdoor scenery images.   |
|   | <b>Vivid</b> optimized for color luster and sharpness.  |
|   | These 7 presets are carefully chosen by Viewsonic, but may not suit all users' tastes. In that case, the user can either return to the Standard setting and manually adjust the brightness and contrast as desired. |
|  | <b>OptiColor Skin Tone</b> includes 3 presets (Natural / Red Tone / Yellow Tone) which user can select according to user's preference.  |



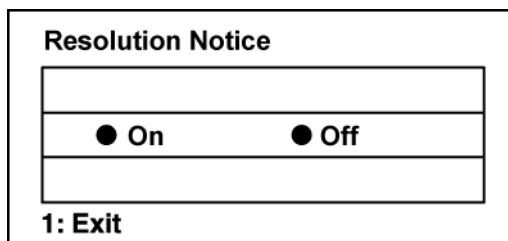
**Setup Menu** displays the menu shown below:



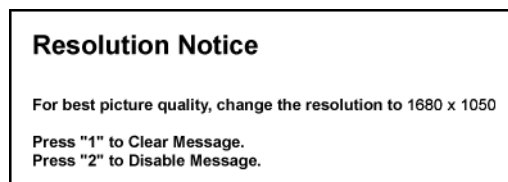
**Language Select** allows the user to choose the language used in the menus and control screens.



**Resolution Notice** allows the user to enable or disable this notice.



If you enable the Resolution Notice shown above and your computer is set at a resolution other than 1680 x 1050, the following screen appears.



**OSD Position** allows the user to move the OSD menus and control screens.



**OSD Timeout** sets the length of time the OSD screen is displayed. For example, with a "30 second" setting, if a control is not pushed within 30 seconds, the display screen disappears.



**OSD Background** allows the user to turn the OSD background On or Off.



**Memory Recall** returns the adjustments back to factory settings if the display is operating in a factory Preset Timing Mode listed in the Specifications of this manual.



## 4. Circuit Description

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### **RTD2553V**

#### **LCD Monitor/MFM Controller**

##### **General**

- . Embedded dual DDC with DDC1/2B/CI
- . Zoom scaling up and down
- . No external memory required.
- . Require only one crystal to generate all timing.
- . Programmable 3.3V/5V detection reset output.
- . Embedded crystal output to micro-controller.
- . 3 channels 8 bits PWM output, and wide range selectable PWM frequency.

##### **Analog RGB Input Interface**

- . Integrated 8-bit triple-channel 210/165 (optional) MHz ADC/PLL
- . Embedded programmable Schmitt trigger of HSYNC
- . Support Sync On Green (SOG) and various kinds of composite sync modes
- . On-chip high-performance hybrid PLLs
- . High resolution true 64 phase ADC PLL
- . Y/Pb/Pr support up to HDTV 1080i resolution
- . Support 2/1 Analog input (optional)

##### **Digital Video Input Interface**

- . Support 8-bit video (ITU 656) format input
- . Support 16-bit video (ITU 601) format input (optional)
- . Built-in YUV to RGB color space converter & de-interlace

##### **DVI Compliant Digital Input Interface (optional)**

- . Single link on-chip TMDS receiver
- . Support to 165Mhz with long cable
- . Adaptive algorithm for TMDS capability
- . Data enable only mode support
- . High-Bandwidth Digital Content Protection (HDCP 1.1) (optional only in H version)
- . Enhanced protection of HDCP secret key (optional only in H version)

##### **Auto Detection /Auto Calibration**

- . Input format detection
- . Compatibility with standard VESA mode and support user-defined mode
- . Smart engine for Phase/Image position/Color calibration

##### **Scaling**

- . Fully programmable zoom ratios
- . Independent horizontal/vertical scaling
- . Advanced zoom algorithm provides high image quality
- . Sharpness/Smooth filter enhancement
- . Support non-linear scaling from 4:3 to 16:9 or 16:9 to 4:3

##### **Vivid Color.**

- . Dynamic Contrast Control (DCC)
- . Independent Color Management (ICM)
- . True 10 bits color processing engine
- . sRGB compliance
- . Advanced Dithering logic for 18-bit panel color depth enhancement
- . Dynamic overshoot-smear canceling engine
- . Brightness and contrast control
- . Programmable 10-bit gamma support

##### **Output Interface**

- . Fully programmable display timing generator
- . Flexible data pair swapping for easier system design.
- . Programmable TCON function support
- . Multi-output interface (RSDS/LVDS/TTL) on single PCB
- . Spread-Spectrum DPLL to reduce EMI
- . Fixed Last Line output for perfect panel capability

##### **Host Interface**

- . Support MCU serial/parallel bus interface.
- . Support MCU dual edge data latch.

### **Embedded OSD**

- . Embedded 12K SRAM dynamically stores OSD command and fonts
- . Support multi-color RAM font, 1, 2 and 4-bit per pixel
- . 16 color palette with 24bit true color selection
- . Maximum 8 window with alpha-blending/gradient/dynamic fade-in/fade-out, bordering/shadow/3D window type
- . Rotary 90,180,270 degree
- . Independent row shadowing/bordering
- . Programmable blinking effects for each character
- . OSD-made internal pattern generator for factory mode
- . Support 12x18~4x18 proportional font
- . Decompress OSD font

### **Power & Technology**

- . 3.3V power supplier
- . 0.18um CMOS process, 128-pin QFP package
- . Embedded 3.3V to 1.8V voltage regulator

### **Analog Input**

RTD integrates three ADC' s (analog-to-digital converters), one for each color (red, green, and blue). The sync-processor can deal with Separate-Sync, Composite-Sync, and Sync-On-Green. And the PLL can generate very low jitter clock from HS to sample the analog signal to digital data. Input data is latched within a capture window defined in registers refer to VS and HS leading edge. RTD also has 2 ADC input, we can switch these 2 input to choose which input we want to present on RTD embedded LCD monitor.

RTD has a YPbPr input, we can connect DVD or some devices that has YPbPr input, YPbPr input can be 1st or 2nd ADC pins.

### **TMDS Input**

RTD integrates high-speed single link receiver function. It can operate up to 165 M at long cable. RTD integrates an equalizer to enhance the cable loss weakness in long cable application and the advanced tracking algorithm to have better performance in DVI RX.

### **Display Output Timing**

The display output port sends single/double pixel data transfer and synchronized display timing to an external device. The display port also support display panel with 6-bit per color, turn on the dithering function to enhance color depth. In single pixel output mode, single pixel data (24-bit RGB) is transferred to display port A on each active edge of DCLK, the rate of DCLK is also equal to display pixel clock. The sync & enable signals are also sent to display port on each active edge of DCLK. In double pixel output mode, double pixel data (48-bit RGB) is transferred to display port A & B on each active edge of DCLK and the rate of DCLK is equal to half display pixel clock at this moment. The sync & enable signals are also sent to display port on each active edge of DCLK.

### **Color Processing**

Digital color R & G & B independent channel sRGB, contrast, brightness, gamma, dithering controls are built in RTD. sRGB compliance function is provided with 9 multipliers. The contrast control is performed a multiply value from 0 to 2 for each R/G/B channel. The brightness control is used to set an offset value from - 512 to +511 also for each R/G/B channel. Also RTD provided 10 bit gamma and a high performance dithering function.

### **Build-In OSD**

The detailed function-description of build-in OSD, please refer to the application note for RTD embedded OSD.

### **Color LUT & Overlay Port**

The following diagram presents the data flow among the gamma correction, dithering, overlay MUX, OSD LUT and output format conversion blocks.

### **Auto-Adjustment**

There are two main independent auto-adjustment functions supported by RTD, including auto-position & auto-tracking. The operation procedure is as following;

### Auto-Position

1. Define the RGB color noise margin: When the value of color channel R or G or B is greater than these noise margins, a valid pixel is found.
2. Define the threshold-pixel for vertical boundary search
3. Define the boundary window of searching for horizontal boundary search.
4. Start auto-function.
5. The result can be read from register.

### Auto-Tracking

1. Setting the control-registers for the function (auto-phase, auto-balance) according to the Control-Table.
2. Define the Threshold
3. Define the boundary window of searching for tracking window.
4. Start auto-function.
5. The result can be read from register

### PLL System

Inside the RTD, there are four PLL systems for display clock and ADC sample clock (PLL1, PLL2, M2PLL, DPLL ).

#### DCLK PLL

$DPLL \text{ frequency} = F_{IN} * DPM / DPN * \text{Divider}$ .

$F_{IN}$  is input crystal frequency. DPM and DPN is in **DPLL\_M** and **DPLL\_N**.

**DPLL\_N**, and it divide PLL frequency by 1, 2, 4 or 8.

According to parameter DPN, you must set LPF Mode in **DPLL\_WD**. If LPF Mode is 1, the charge pump current,  $I_{ch}$ , must be  $DPM/17.6$ , while  $I_{ch}$  must be  $DPM/1.67$  if LPF Mode is 0. The charge pump current  $I_{ch}$  is in **DPLL\_CRNT**.

Spread-Spectrum function is also build in DCLK to reduce EMI. You can control the SSP\_I, SSP\_W, and FMDIV to fine-tune the EMI.

M2PLL is a PLL used to power-on reset, FIFO clock and Internal crystal clock. After power-on reset, M2PLL output 10 times frequency of crystal clock. According to crystal frequency, set M2PLL to keep FIFO clock frequency between 240MHz and 250MHz.

#### ADC Pixel Sampling PLL

The input pixel sampling PLL of RTD compose of PLL1 and PLL2 and DDS, the hybrid PLL system inherently has a process-independent advantages comparing with pure analog PLL, DDS synthesizer is in charge of the phase-frequency control, PLL1 provided a high frequency to get a larger bandwidth letting the system fast locking, PLL2 finally synthesize the desired pixel sampling clock. The block diagram shown below describes our high-performance tracking system.

### Host Interface

#### Parallel/Serial Port Determination:

After RESET end, the status of pin 5 (TMDS\_TST) can be sensed to determine the interface mode: high for parallel port, low, low for serial port.

#### Host Interface Location Determination:

After the falling edge of RESET signal, the status of pin 3 can be sensed to determine the host interface location: high for 112-115, 118, 119, and low for 52-57

#### Reset Output

We have the RESET\_OUT function, and also reserve the RESET\_IN function. By the bounding of internal pins we can select two kinds of reset function. First of all is only reset-out, we can output the reset signal to MCU, and the MCU can reset the RTD by firmware. The second is RTD output reset and also reset itself. Notice that the reset output is positive polarity, besides, the reset output is open-drain pin, please don't forget to attach a **pull-up resistor (10K)**. The reset function for 3.3V operating voltage detection is determined by **33VRST\_REF** voltage, No matter 5V or 3.3V MCU is been used, divider the input voltage on 33VRST\_REF to 2.2V for internal power sensing circuit detecting, the divider resistor should be 10K level avoiding current leakage.

#### The Programmable Schmitt Trigger of HSYNC

To get better waveform of the input HSYNC, we have a programmable Schmitt Trigger circuit. For different HSYNC amplitude and polarity, we can select different setting of the threshold voltage. The **Vt +** and the **Vt -** can be selected by register CR97 We can select the old mode or the new mode. When using the new mode we can directly determine the positive threshold voltage (1.4V, 1.6V... 2.6V), and we can choose the hysteresis from the **Vt +** to determine the **Vt -** (0.6V, 0.8V, 1.0V, 1.2V). We also can finely tune the voltage by minus 0.1V. For application, we can select different threshold voltage by the polarity of the HSYNC. The control register is CR97

### **Crystal Frequency Output**

RTD can output crystal frequency or 1/2 crystal frequency to external MCU to save a crystal device. Once power state is on and reset is finished, we can set crystal frequency by firmware and output to pin 48 and pin 110 simultaneously, and then can turn off them in Pin Share Part. Pin 48 and PIN 110 is configurable, detail setting is listed in Pin-Share part

### **RTD2120 8051 Embedded Micro-Controller for Monitor**

#### *Overview*

This chip is the micro-processor of LCD monitor. It uses the design ware DW8051 of Synopsys as the 8051 core of this chip and is compatible with other industry 8051 series. Also, 96Kbyte FLASH with 8 bit bus is embedded in this chip which is licensed from TSMC 0.18um e-FLASH process. Here we use the package of PLCC44/LQFP48 if we would like to have a discrete MCU controller or we make a multi-chip package with our LCD monitor controller to form one chip package to save the cost of package and PCB material.

#### **Features**

- Operating voltage range : 3.0V to 3.6V
- 8051 core, CPU operating frequency up to 50MHz
- 4 clocks per machine cycle
- 256-byte internal RAM
- 512-byte external data RAM, including 256-byte DDC RAM(128-byte x 2) and 256-byte general purpose RAM
- 96K-byte flash memory, 64k for program and 32k for saving parameter
- Two DDC ports compliant with VESA DDC1/2B/2Bi/CI
- Three channels of PWM DAC with programmable frequency from 100K to 100Hz
- Watchdog timer with programmable interval
- Three 16-bit counters/timers (T0, T1, and T2)
- One PLL to provide programmable operating frequency and clock output, 2 clock output ports
- One full-duplex serial port
- Six interrupt sources with 2 external interrupts
- Four channels of 6-bit ADC
- Hardware In System Programming(ISP) capability, no boot code required
- Built-in Low voltage reset circuit
- Embedded 1.8V regulator
- Code protection
- Available in 44-pin PLCC or 48-pin LQFP package

### **AUDIO STEREO CLASS-D AUDIO POWER AMPLIFIER**

#### **DESCRIPTION**

The TPA2008D2 is a third generation 5-V class-D amplifier from Texas Instruments. Improvements to previous generation devices include: dc volume control, lower supply current, lower noise floor, higher efficiency, smaller packaging, and fewer external components. Most notably, a new filter-free class-D modulation technique allows the TPA2008D2 to directly drive the speakers, without needing a low-pass output filter consisting of two inductors and three capacitors per channel. Eliminating this output filter saves approximately 30% in system cost and 75% in PCB area.

The improvements and functionality make this device ideal for LCD projectors, LCD monitors, powered speakers, and other applications that demand more battery life, reduced board space, and functionality that surpasses currently available class-D devices.

A chip-level shutdown control limits total supply current to 1  $\mu$ A, making the device ideal for battery powered applications. Protection circuitry increases device reliability: thermal and short circuit. Under voltage shutdown saves battery power for more essential devices when battery voltage drops to low level.

## 5. Adjustment Procedure

### 1. Function Test

#### 1.1 Product

- 22" LCD Monitor

#### 1.2 Test Equipment

- Color Video Signal & Pattern (or PC with WSXGA+ resolution and a sound card)

#### 1.3 Test Condition

Before function test and alignment, each LCD Monitor should be run-in and warmed up for at least 30 minutes with the following conditions:

- (a) In room temperature,
- (b) With full-white screen, RGB, and Black
- (c) With cycled display modes,  
640\*480 (H=43.27kHz, V=85Hz)  
800\*600 (H=53.7kHz, V=85Hz)  
1024\*768 (H=68.67kHz, V=85Hz)  
1680\*1050 (H=64.7kHz, V=60Hz)

#### 1.4 Test Display Modes & Pattern

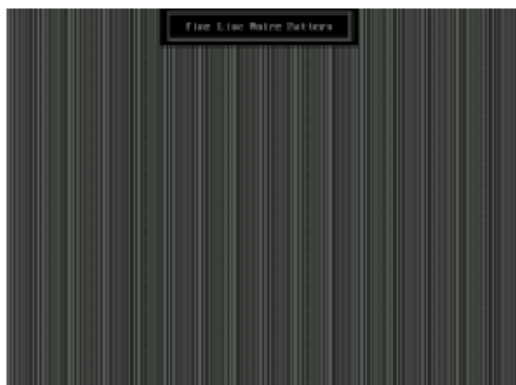
##### 1.4.1 Compatible Modes

| Analog                          | Digital                     |
|---------------------------------|-----------------------------|
| 1. 640 x 350 @ 70Hz, 31.5kHz    | 640 x 350 @ 70Hz, 31.5kHz   |
| 2. 640 x 400 @ 60Hz, 31.5kHz    | 640 x 400 @ 60Hz, 31.5kHz   |
| 3. 640 x 400 @ 70Hz, 31.5kHz    | 640 x 400 @ 70Hz, 31.5kHz   |
| 4. 640 x 480 @ 50Hz, 24.7kHz    | 640 x 480 @ 50Hz, 24.7kHz   |
| 5. 640 x 480 @ 60Hz, 31.5kHz    | 640 x 480 @ 60Hz, 31.5kHz   |
| 6. 640 x 480 @ 67Hz, 35.0kHz    | 640 x 480 @ 67Hz, 35.0kHz   |
| 7. 640 x 480 @ 72Hz, 37.9kHz    | 640 x 480 @ 72Hz, 37.9kHz   |
| 8. 640 x 480 @ 75Hz, 37.5kHz    | 640 x 480 @ 75Hz, 37.5kHz   |
| 9. 640 x 480 @ 85Hz, 43.27kHz   | 640 x 480 @ 85Hz, 43.27kHz  |
| 10. 720 x 400 @ 70Hz, 31.5kHz   | 720 x 400 @ 70Hz, 31.5kHz   |
| 11. 720 x 480 @ 60Hz, 31.5kHz   | 720 x 480 @ 60Hz, 31.5kHz   |
| 12. 720 x 576 @ 50Hz, 31.3kHz   | 720 x 576 @ 50Hz, 31.3kHz   |
| 13. 800 x 600 @ 50Hz, 24.7kHz   | 800 x 600 @ 50Hz, 24.7kHz   |
| 14. 800 x 600 @ 56Hz, 35.1kHz   | 800 x 600 @ 56Hz, 35.1kHz   |
| 15. 800 x 600 @ 60Hz, 37.9kHz   | 800 x 600 @ 60Hz, 37.9kHz   |
| 16. 800 x 600 @ 70Hz, 43 kHz    | 800 x 600 @ 70Hz, 43 kHz    |
| 17. 800 x 600 @ 72Hz, 48.1kHz   | 800 x 600 @ 72Hz, 48.1kHz   |
| 18. 800 x 600 @ 75Hz, 46.9kHz   | 800 x 600 @ 75Hz, 46.9kHz   |
| 19. 800 x 600 @ 85Hz, 53.7kHz   | 800 x 600 @ 85Hz, 53.7kHz   |
| 20. 832 x 624 @ 75Hz, 49.7kHz   | 832 x 624 @ 75Hz, 49.7kHz   |
| 21. 1024 x 768 @ 50Hz, 39.6kHz  | 1024 x 768 @ 50Hz, 39.6kHz  |
| 22. 1024 x 768 @ 60Hz, 48.4kHz  | 1024 x 768 @ 60Hz, 48.4kHz  |
| 23. 1024 x 768 @ 70Hz, 56.5kHz  | 1024 x 768 @ 70Hz, 56.5kHz  |
| 24. 1024 x 768 @ 72Hz, 58.1kHz  | 1024 x 768 @ 72Hz, 58.1kHz  |
| 25. 1024 x 768 @ 75Hz, 60 kHz   | 1024 x 768 @ 75Hz, 60 kHz   |
| 26. 1024 x 768 @ 85Hz, 68.7 kHz | 1024 x 768 @ 85Hz, 68.7 kHz |
| 27. 1152 x 864 @ 75Hz, 67.5 kHz | 1152 x 864 @ 75Hz, 67.5 kHz |
| 28. 1152 x 870 @ 75Hz, 68.7 kHz | 1152 x 870 @ 75Hz, 68.7 kHz |

| Analog                           | Digital                      |
|----------------------------------|------------------------------|
| 29. 1280 x 720 @ 50Hz, 37.5 kHz  | 1280 x 720 @ 50Hz, 37.5 kHz  |
| 30. 1280 x 720 @ 60Hz, 45 kHz    | 1280 x 720 @ 60Hz, 45 kHz    |
| 31. 1280 x 768 @ 50Hz, 39.6 kHz  | 1280 x 768 @ 50Hz, 39.6 kHz  |
| 32. 1280 x 768 @ 60Hz, 47.8 kHz  | 1280 x 768 @ 60Hz, 47.8 kHz  |
| 33. 1280 x 768 @ 75Hz, 60.3 kHz  | 1280 x 768 @ 75Hz, 60.3 kHz  |
| 34. 1280 x 960 @ 50Hz, 49.4 kHz  | 1280 x 960 @ 50Hz, 49.4 kHz  |
| 35. 1280 x 960 @ 60Hz, 59.7 kHz  | 1280 x 960 @ 60Hz, 59.7 kHz  |
| 36. 1280 x 960 @ 75Hz, 75.2 kHz  | 1280 x 960 @ 75Hz, 75.2 kHz  |
| 37. 1280 x 1024 @ 60Hz, 64 kHz   | 1280 x 1024 @ 60Hz, 64 kHz   |
| 38. 1280 x 1024 @ 75Hz, 80 kHz   | 1280 x 1024 @ 75Hz, 80 kHz   |
| 39. 1400 x 1050 @ 60Hz, 65.3 kHz | 1400 x 1050 @ 60Hz, 65.3 kHz |
| 40. 1400 x 900 @ 60Hz, 55.5 kHz  | 1400 x 900 @ 60Hz, 55.5 kHz  |
| 41. 1400 x 900 @ 75Hz, 75 kHz    | 1400 x 900 @ 75Hz, 75 kHz    |
| 42. 1600 x 1200 @ 60Hz, 75 kHz   | 1600 x 1200 @ 60Hz, 75 kHz   |
| 43. 1680 x 1050 @ 60Hz, 64.7 kHz | 1680 x 1050 @ 60Hz, 64.7 kHz |

#### 1.4.2 Function Test Display Pattern

| Item | Test Content                | Pattern                         | Specification   | Remark         |
|------|-----------------------------|---------------------------------|---|----------------|
| 1    | Frequency & Tracking        | Fine Line Moire                 | Eliminate visual wavy noise.  | Figure 1       |
| 2    | Contrast/Brightness         | 16 Gray Scale                   | 16 gray levels should be distinguishable.   | Figure 2       |
| 3    | Boundary                    | Horizontal & Vertical Thickness | Horizontal and Vertical position of video should be adjustable to be within the screen frame. | Figure 3       |
| 4    | RGB Color Performance       | RGB Color Intensities           | Contrast of each R, G, B, color should be normal.   | Figure 4, 5, 6 |
| 5    | Screen Uniformity & Flicker | Full White                      | Should be compliant with the spec.  | Figure 7       |
| 6    | Dead Pixel/Line             | White Screen & Dark Screen      | The numbers of dead pixels should be compliant with the spec.                                 | Figure 7, 8    |
| 7    | White Balance               | White & Black Pattern           | The screen must have the pure white and black pattern, no other color.                        | Figure 9       |



Fine Line Moire Pattern (Figure1)



Gray Scale Pattern (Figure2)



Horizontal & Vertical Thickness Pattern (Figure 3)



R. Color Pattern (Figure 4)



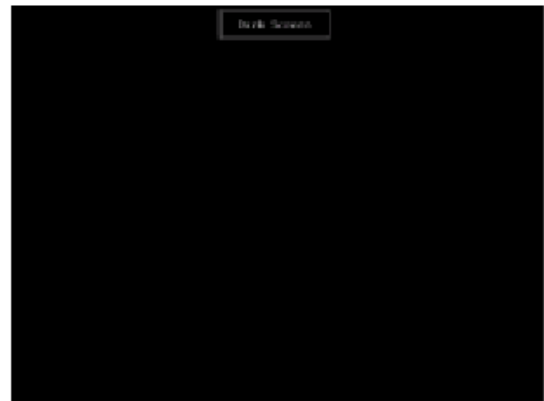
G. Color Pattern (Figure 5)



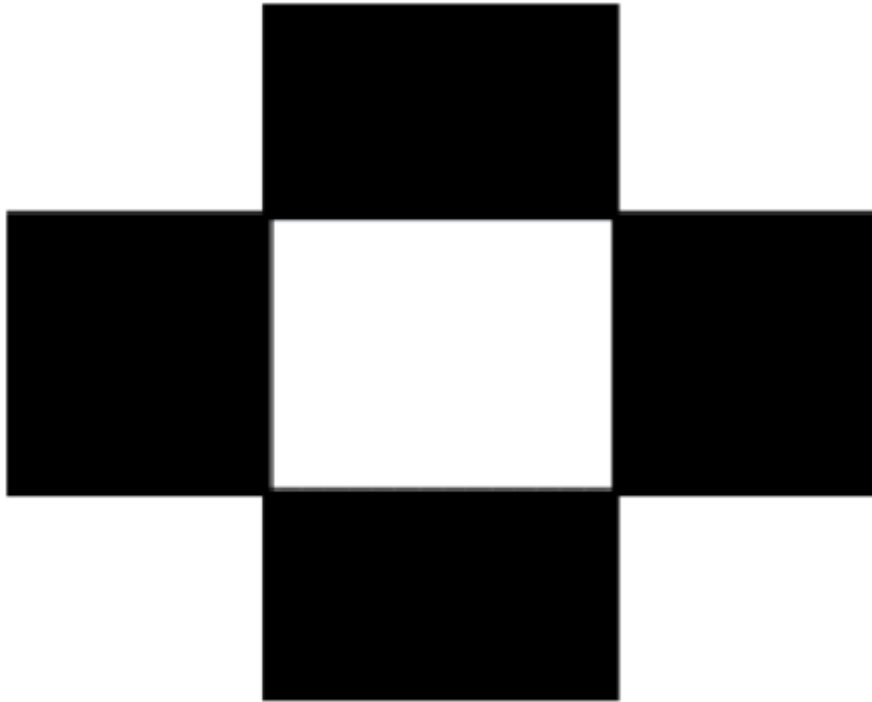
B. Color Pattern (Figure 6)



Full White Pattern (Figure 7)



Dark Screen Pattern (Figure 8)



Black-White Pattern (Figure 9)

## 1.5 Function Test and Alignment Procedure

### 1.5.1 All Modes Reset

You should do “All Mode Reset” (Refer to Chapter III-3. Hot Keys for Function Controls) first. This action will allow you to erase all end-user’s settings and restore the factory defaults.

### 1.5.2 Auto Image Adjust

Please select and enter “**Auto Image Adjust**” function on Main Menu to see if it is workable. The “**Auto Image Adjust**” function is aimed to offer a better screen quality by built-in ASIC. For optimum screen quality, the user has to adjust each function manually.

### 1.5.3 Firmware

Test Pattern: Burn In Mode (Refer to Chapter III-3. Hot Keys for Function Controls)

- Make sure the F/W is the latest version.

### 1.5.4 DDC

Test Pattern: EDID program

- Make sure it can pass test program.

### 1.5.5 Fine Tune and Sharpness

Test Signal: 1680\*1050@60Hz

Test Pattern: Line Moire Pattern

- Check and see if the image has noise and focus performs well. Eliminate visual line bar.

- If not, readjust by the following steps:

(a) Select and enter “**Fine Tune**” function on “**Manual Image Adjust**” to adjust the image to eliminate visual wavy noise.

(b) Then, select and enter “**Sharpness**” function to adjust the clarity and focus of the screen image.

### 1.5.6 Boundary

Test Signal: 1680\*1050@60Hz

Test Pattern: Horizontal & Vertical Line Thickness Pattern

- Check and see if the image boundary is within the screen frame.
- If not, readjust by the following steps:



- (a) Select and enter “**Manual Image Adjust**” function on OSD Main Menu.
- (b) Then, select and enter “**Horizontal Size**” or “**Horizontal/Vertical Position**” function to adjust the video boundary to be full scanned and within screen frame.

#### 1.5.7 White Balance

Test Signal: 1680\*1050@60Hz

Test Pattern: White and Black Pattern

#### 1.5.8 R, G, B, Colors Contrast

Test Signal: 1680\*1050@60Hz

Test Pattern: R, G, B, Color Intensities Pattern and 16 Gray Scale Pattern

- Check and see if each color is normal and distinguishable.
- If not, please return the unit to repair area.

#### 1.5.9 Screen Uniformity and Flicker

Test Signal: 1680\*1050@60Hz

Test Pattern: Full White Pattern

- Check and see if it is in normal condition.

#### 1.5.10 Dead Pixel and Line

Test Signal: 1680\*1050@60Hz

Test Pattern: Dark and White Screen Pattern

- Check and see if there are dead pixels on LCD panel with shadow gauge and filter film.
- The total numbers and distance of dead pixels should be compliant with the spec.

#### 1.5.11 Mura

Test Pattern: White, RGB, Black, & Grey

Test Tool: 8% ND Filter

- Check if the Mura can pass 8% ND Filter.

#### 1.5.12 Audio

Test Signal: Voice signal (optional, depend on model)

Test Pattern: liberty

- Make sure there is audio output.
- Make sure that audio function (volume 80%) is working without noise and resonance.  $\leq$
- Make sure that the sound of right and left speakers are in balance.

#### 1.5.13 Check for Secondary Display Modes

Test Signal:

Analog: 640\*350@70Hz; 640\*480@60HZ

720\*400@70Hz; 800\*600@60HZ/70HZ/75HZ

832\*624@75Hz, 1024\*768@60HZ/70HZ/75HZ

1280\*1024@60/75Hz

Digital: 640\*350@70Hz; 640\*480@60HZ

720\*400@70Hz; 800\*600@60HZ/70HZ/75HZ

1024\*768@60/70/72/75; 1152\*870@75Hz,

1280\*1024@60Hz/75HZ

- Normally when the primary mode 1280\*1024@60Hz is well adjusted and compliant with the specification, the secondary display modes will be great possible to be compliant with the spec. But we still have to check with the general test pattern to make sure every secondary is compliant with the specification.

#### 1.5.14 All Modes Reset

After final QC step, we have to erase all saved changes again and restore the factory defaults. You should do “All Mode Reset” again.

#### 1.5.15 Power Off Monitor

Turn off the monitor by pressing “Power” button.

## 2. Firmware Upgrade Procedure

When you receive the returned monitor, please check whether the firmware version is the latest.

If not, please do the following procedures to upgrade it to the latest version.

### 2.1 Equipment Needed

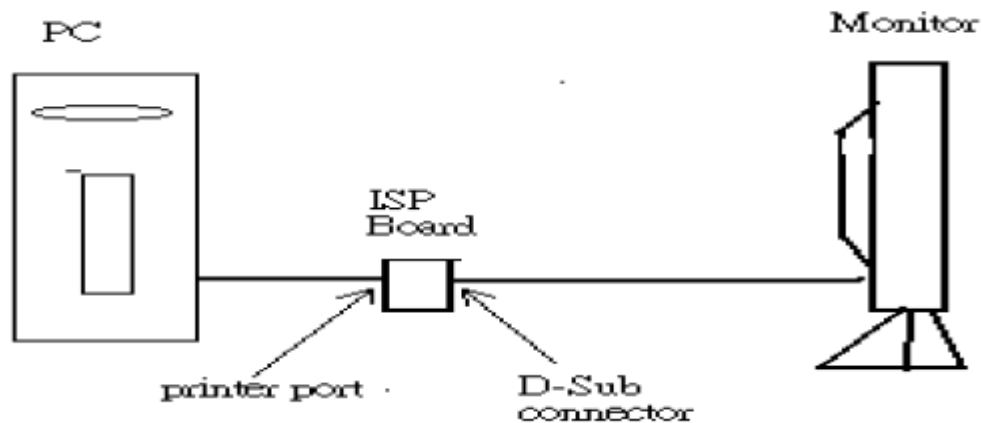
- VX2235WM3 Monitor
- Fixture for Firmware Upgrade
- VGA Cable
- PC (Personal Computer)
- LPT Cable
- Firmware Upgrade Program
- One additional monitor for checking the program execution

### 2.2 Setup Procedure

- 2.2.1 Connect P2 of Fixture with printer port of PC by LPT Cable.
- 2.2.2 Connect P1 of Fixture with Monitor by VGA Cable.
- 2.2.3 Connect Power Cord to Monitor.
- 2.2.4 Connect PC to the additional monitor.

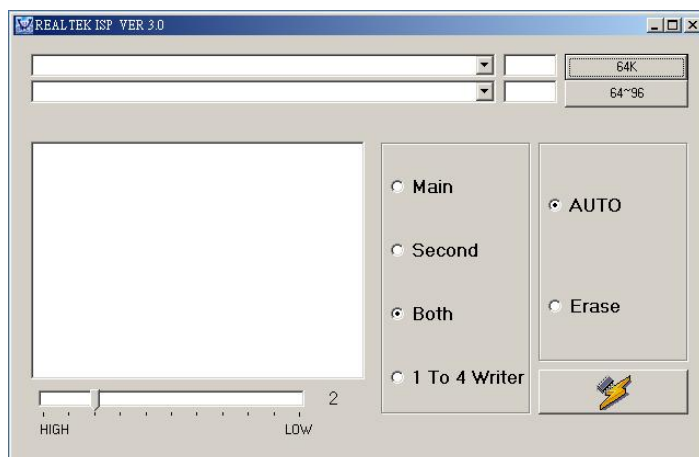
## I. ISP Download program procedure

### 1 Hardware Connect status:



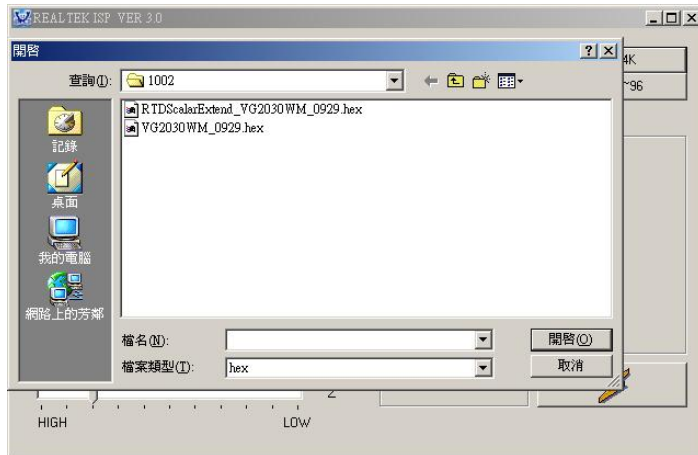
### 2 Down load isp program

#### Step 1: Execute ISP.exe



### Step 2: Load file

Press the Load MCU File button to select the file will be download. (\*.hex)

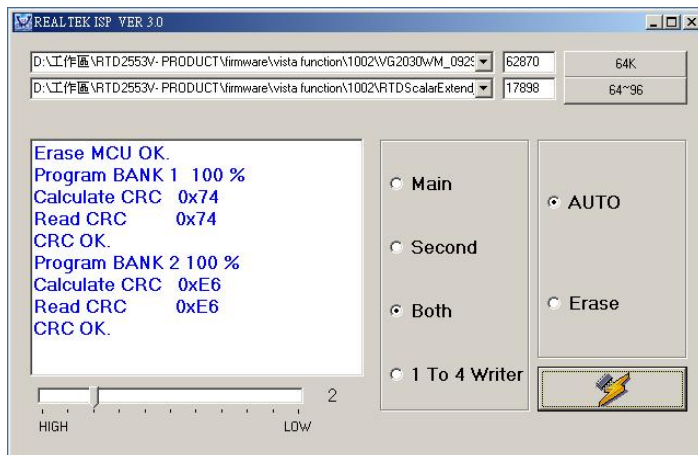


### Step 3: Run

Pressing the Run Button to start download program. Press OK button to Enter ISP mode.

### Step 4: Download program finish

Pressing the OK Button to finish the download program procedure.



### Trouble shooting:

If you find the status like the follow picture. Please check the following item.

a. The connecting status between PC and ISP board.

b. The connecting status between ISP status and Monitor.

Turn off the power of monitor (AC plug off ) and disconnect the D-Sub connector . To connect the D-Sub connector and then turn on the power of monitor.(AC plug on)

### 3. DDC Key In Procedure

#### Note:

1. Every time after replacing the main board, you have to do the DDC key in.
2. If you find the DDC does not conform to the monitor, you have to do the DDC key in.

#### 3.1 Equipment Needed

- VX2235WM3 Series Monitor
- DDC Card
- PC
- RS232 cable
- DVI-DVI Cable
- Barcode Reader
- VGA Cable



VX2235WM3



DDC Card



PC



RS232 cable



VGA cable



BAR code reader

#### 3.2 Setup Procedure

1. Connect VGA Card and DDC Card with RS-232 cable.
2. Barcode Reader connect with keyboard and PC keyboard port.



3. Connect RS-232 Cable and VX2235WM3 with VGA Cable.
4. (when key in DVI DDC information, use VGA transform to DVI port )
5. Connect Power Cord to VX2235WM3 Monitor.

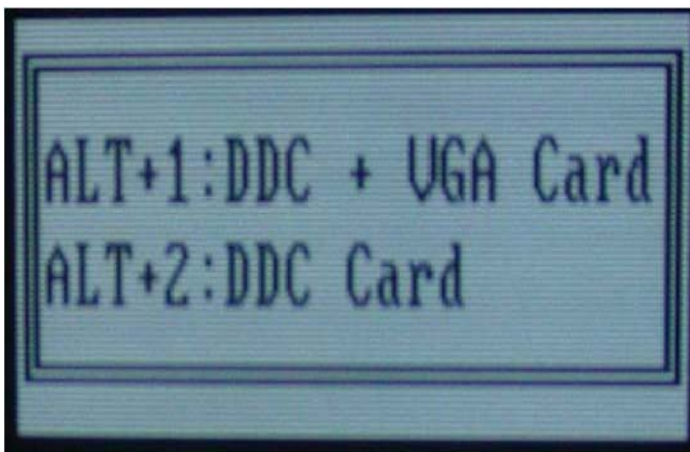


### 3.3 DDC Key In Procedure

- 1.Run DDC.exe
- 2.Choose model number and conform the Time then Press “ENTER” key.



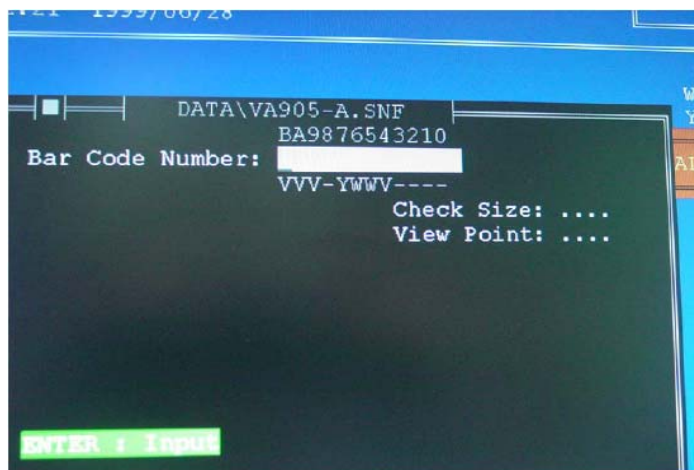
- 3.When appear the PIC “ choose DDC Card”, Press ALT+2 .Enter DDC 2B test interface.



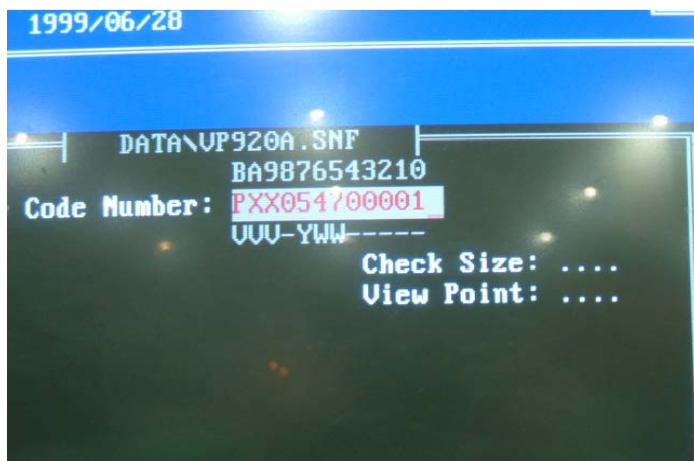
Choose DDC Card

- 4.Press F8 to choose corresponding model.DAT(VX2235WM3A.DAT press“ENTER” key)  
VX2235WM3\_A means the DDC under analog mode. VX2235WM3D means the DDC under digital mode.

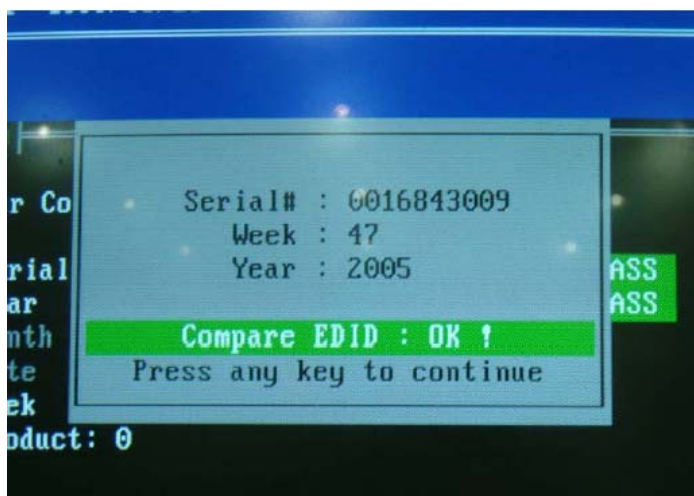
5. Press F9 enter the download interface



6. Key in the serial number or use the barcode reader to scan the barcode of the monitor, and press "ENTER" key.



7. The successful picture is as follows. "Compare EDID : OK! Press any key to continue".





## Packing For Shipping And Disassembly Procedure

### Packing For Shipping

#### 1. Packing Procedure

1.1 Paste protection film to protect the LCD TV. (Figure 1)

1.2 Put the LCD TV in the PE bag and seal the bag. (Figure 2~3)



Figure 1



Figure 2



Figure 3

1.3 Put the cushions on the LCD TV. (Figure 4)

1.4 Place the LCD TV into the carton and then Put the other cushions on the LCD TV, put all the accessories into the carton. At last, close the carton and seal it with tape. (Figure 5)



Figure 4

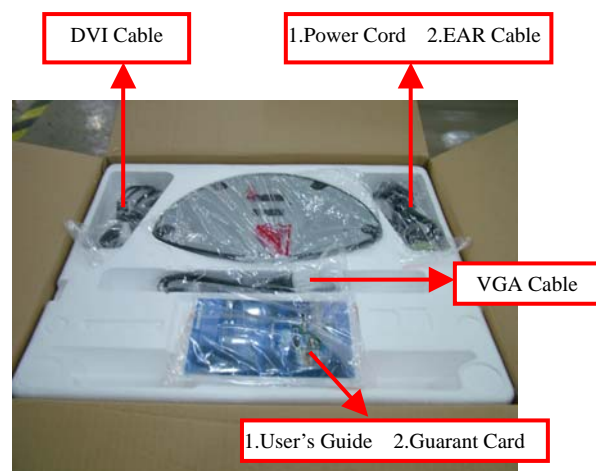


Figure 5

## Disassembly Procedure

### 1. Disassembly of Stand and Dust Cover from LCD TV.

1.1 Unscrew 4 screws that secure Stand Unit and detach Dust Cover from the LCD TV.



Stand

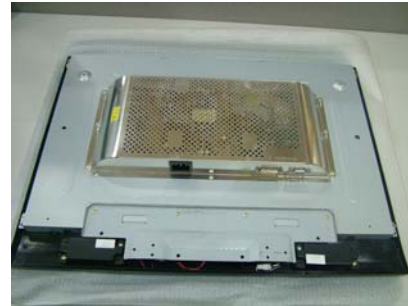
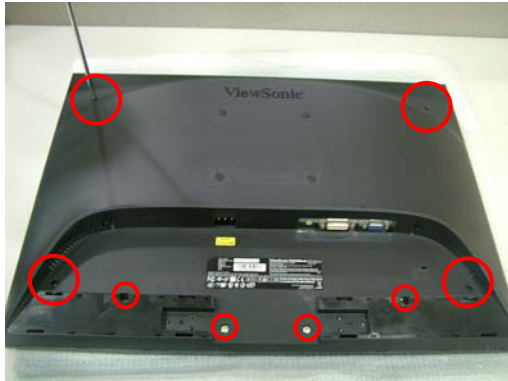


Dust Cover



## 2. Disassembly of Rear Cover.

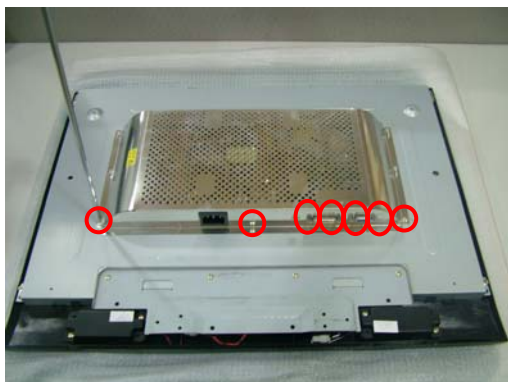
2.1 Unscrew 8 screws to remove Rear Cover.



Rear Cover

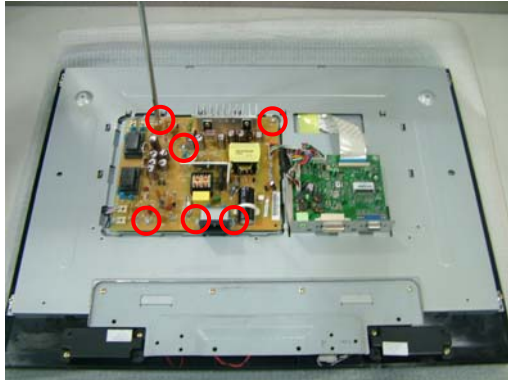
## 3. Disassembly of Main Board,Power Board,IR Board,Speaker,Front Cover and Panel Unit.

3.1 Unscrew 7 screws to remove Shield Plate.



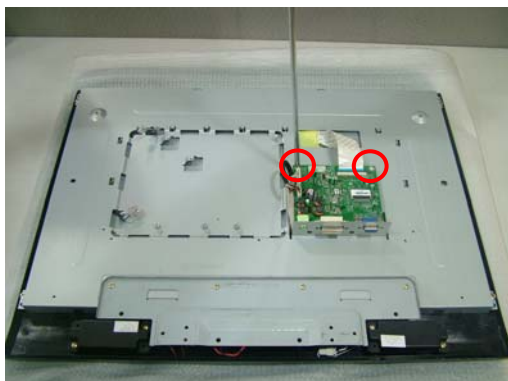
Shield Plate

3.2. Unscrew 6 screws and disconnect the wires to remove Power Board.



Power Board

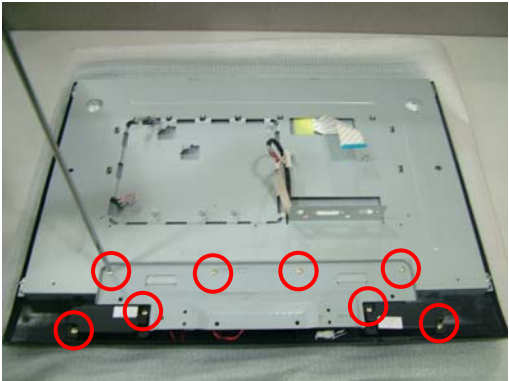
3.3. Unscrew 2 screws and disconnect the wires to remove Main Board.



Main Board



3.4. Unscrew 8 screws to remove Speaker and bracket fix.

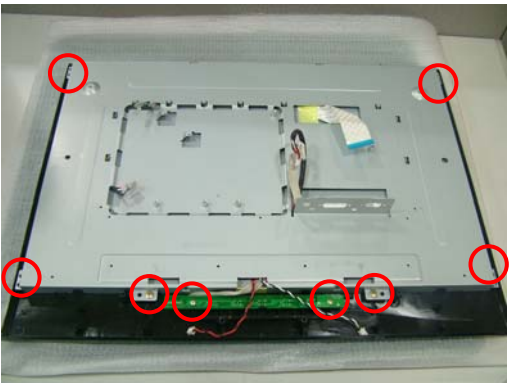


Bracket,Fix

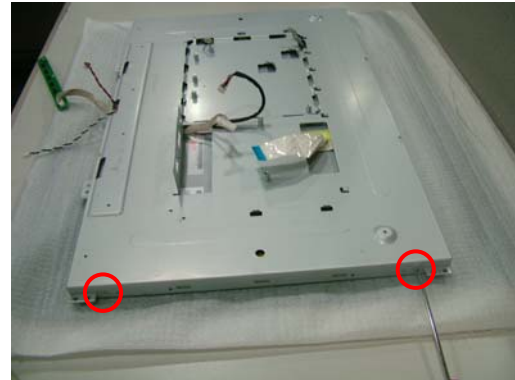
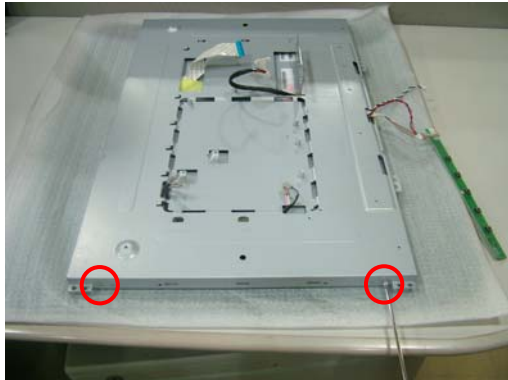


Speaker

3.5. Unscrew 8 screws to remove Front Cover.



3.6. Lay Panel Unit facedown and unscrew 4 screws on its right and left sides, to remove Panel Unit and Panel Bracket.



Panel Bracket



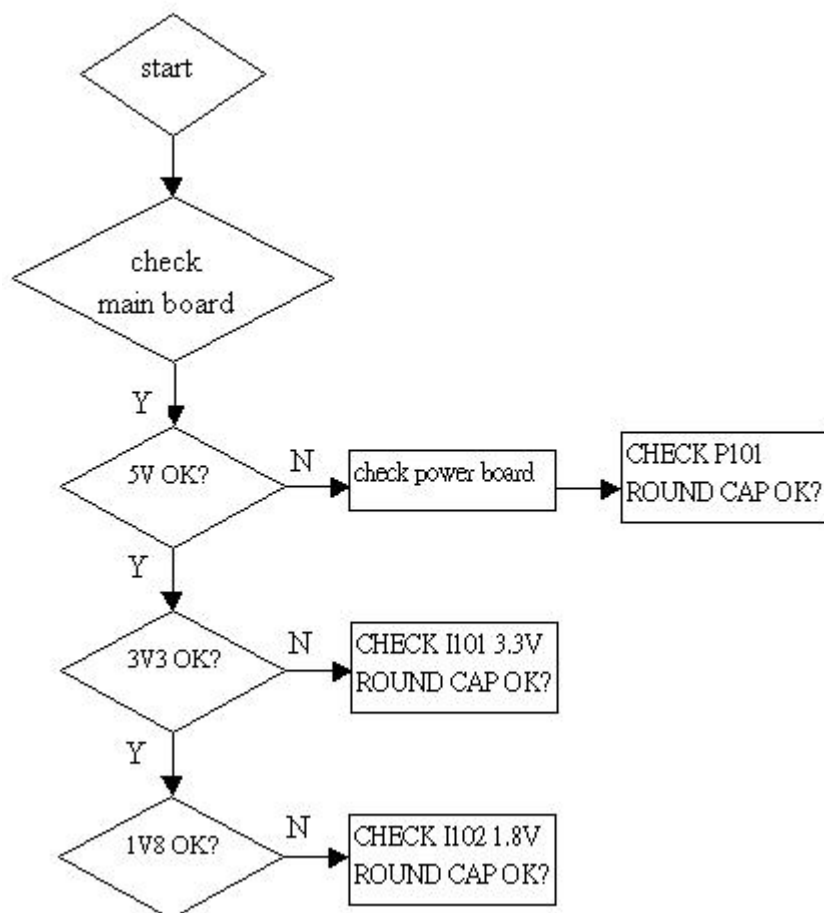
Key Poard



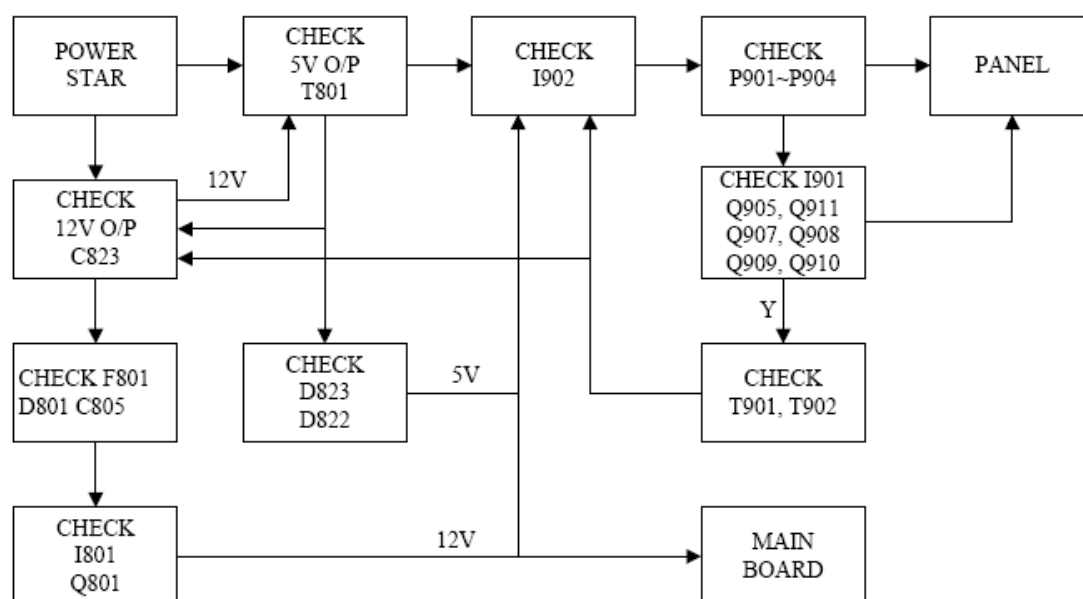
Panel Unit

## 6. Troubleshooting Flow Chart

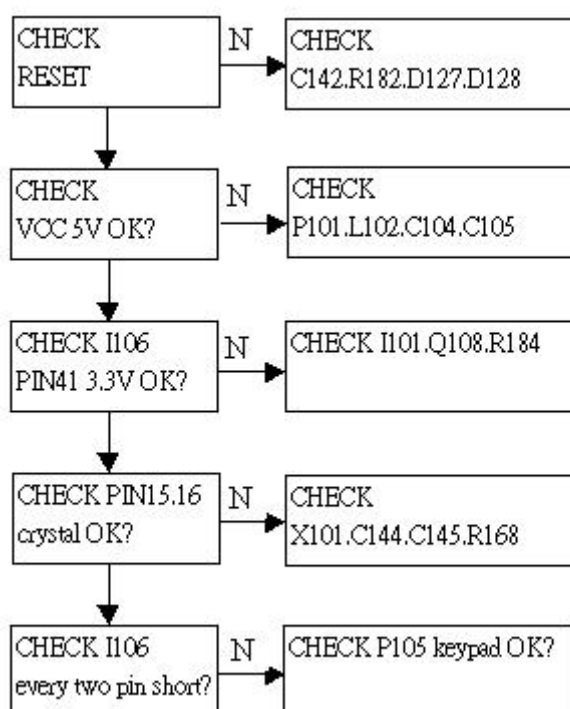
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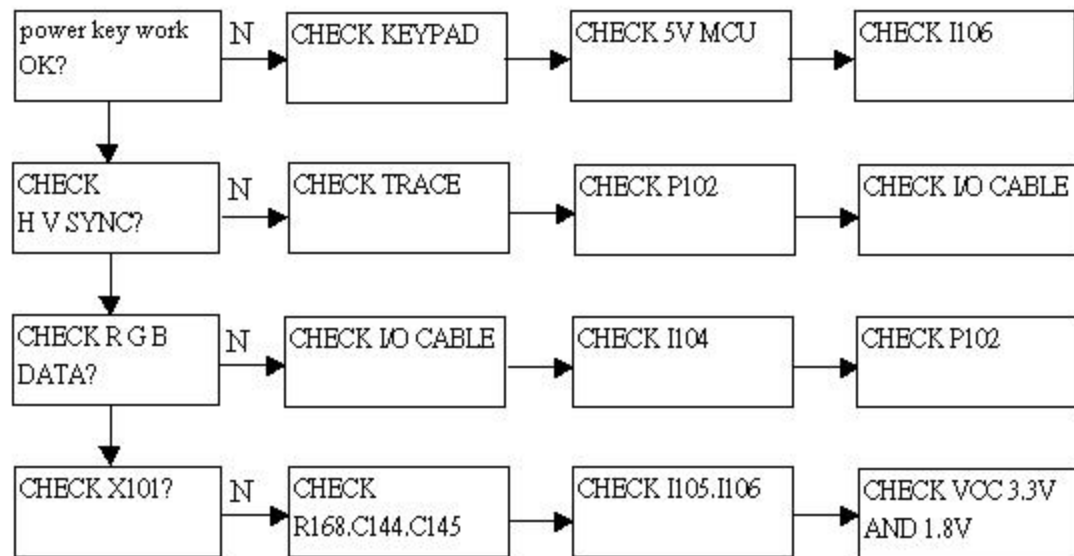
## 6.1. NO POWER



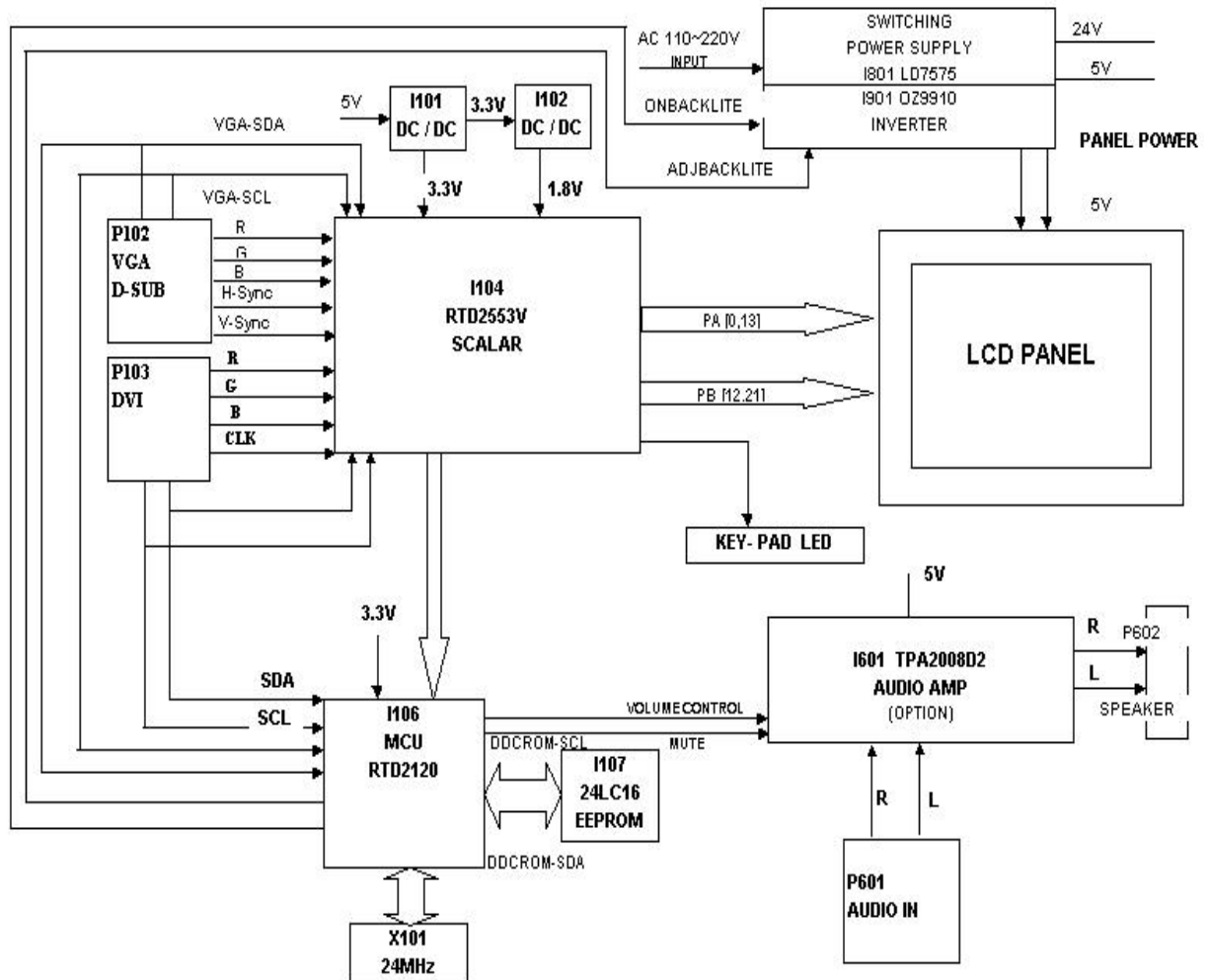
## 6.2. MCU NO FUNCTION



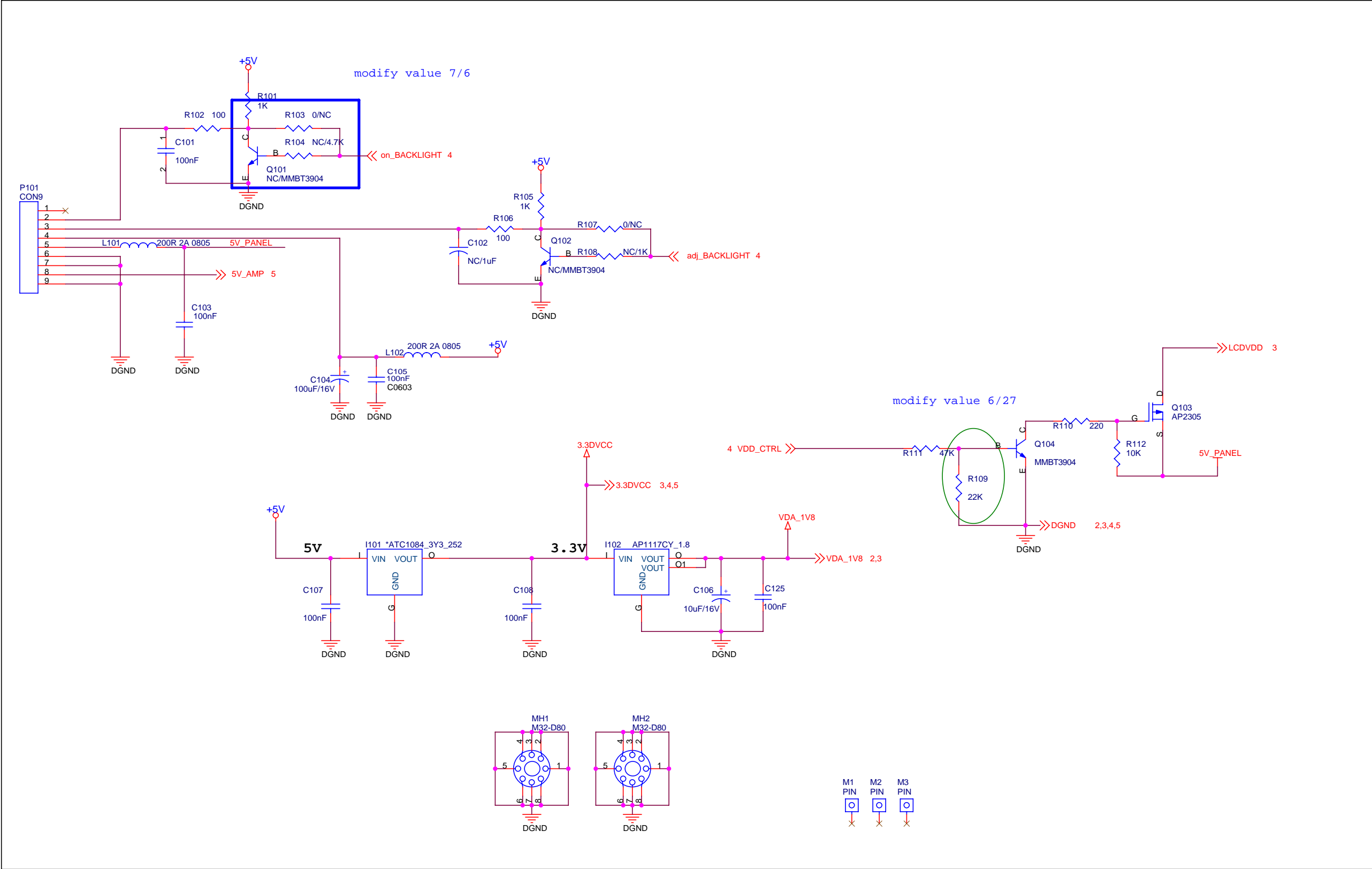
### 6.3. NO DISPLAY



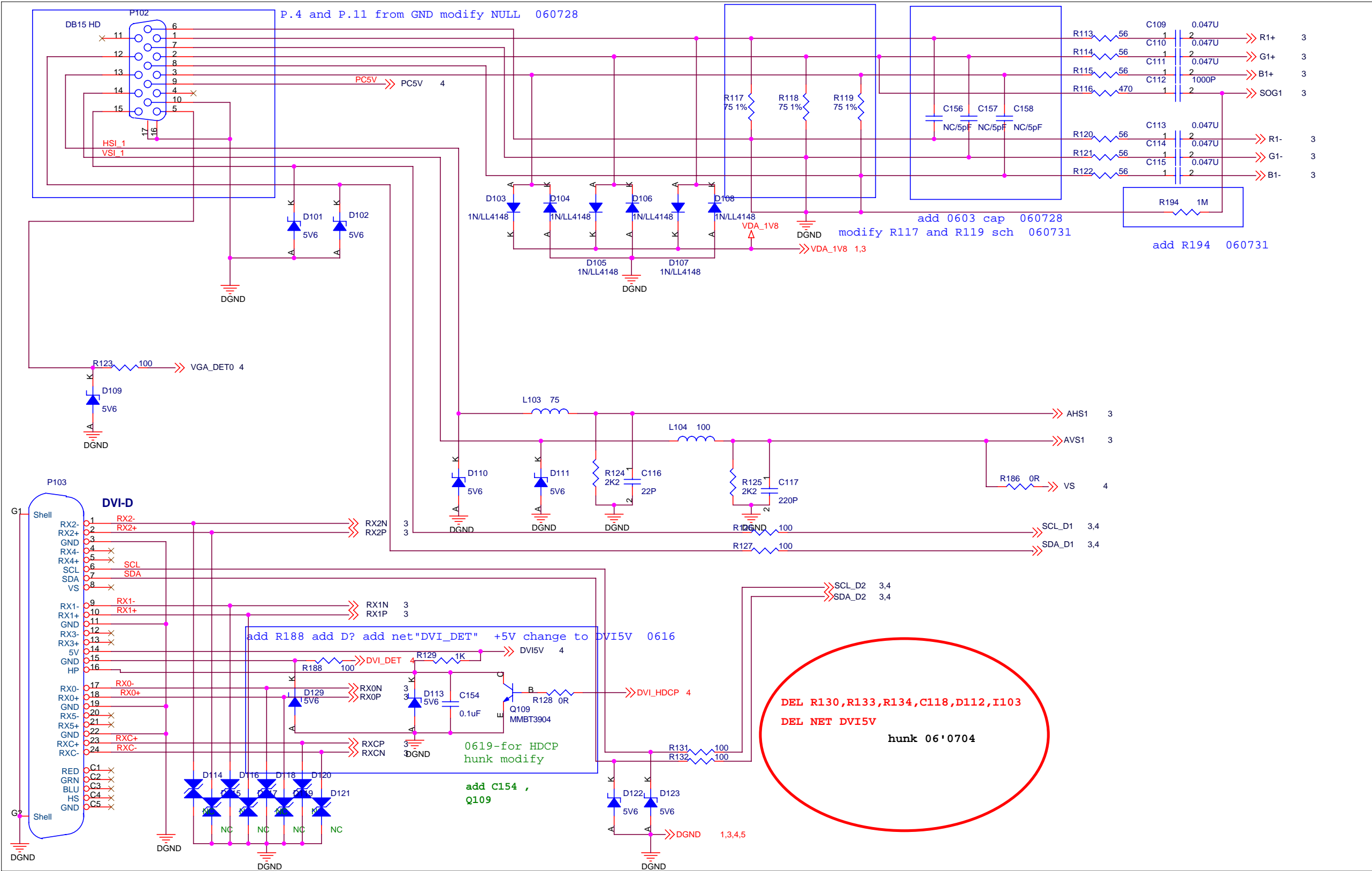
## 7. Block Diagram



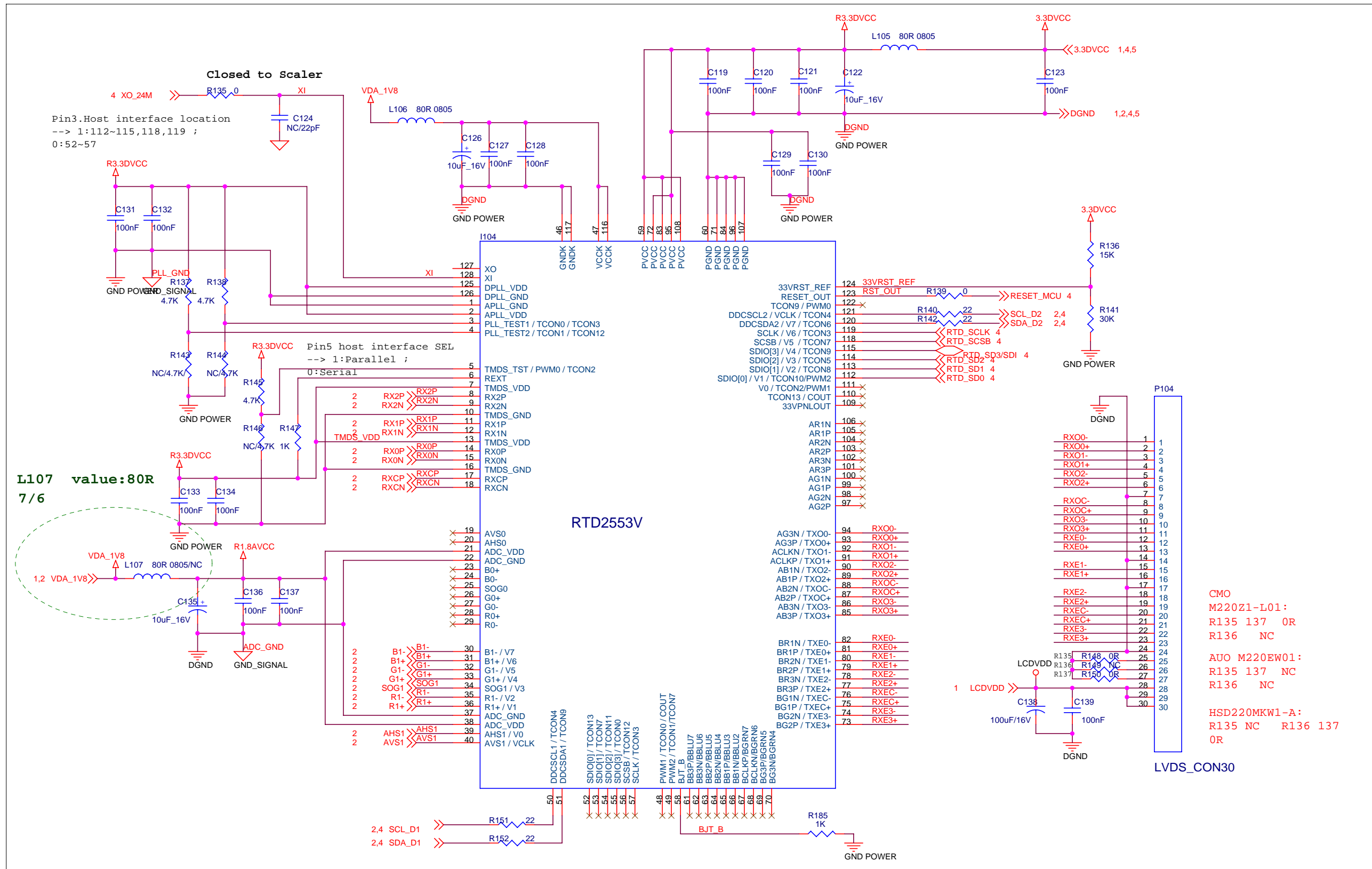




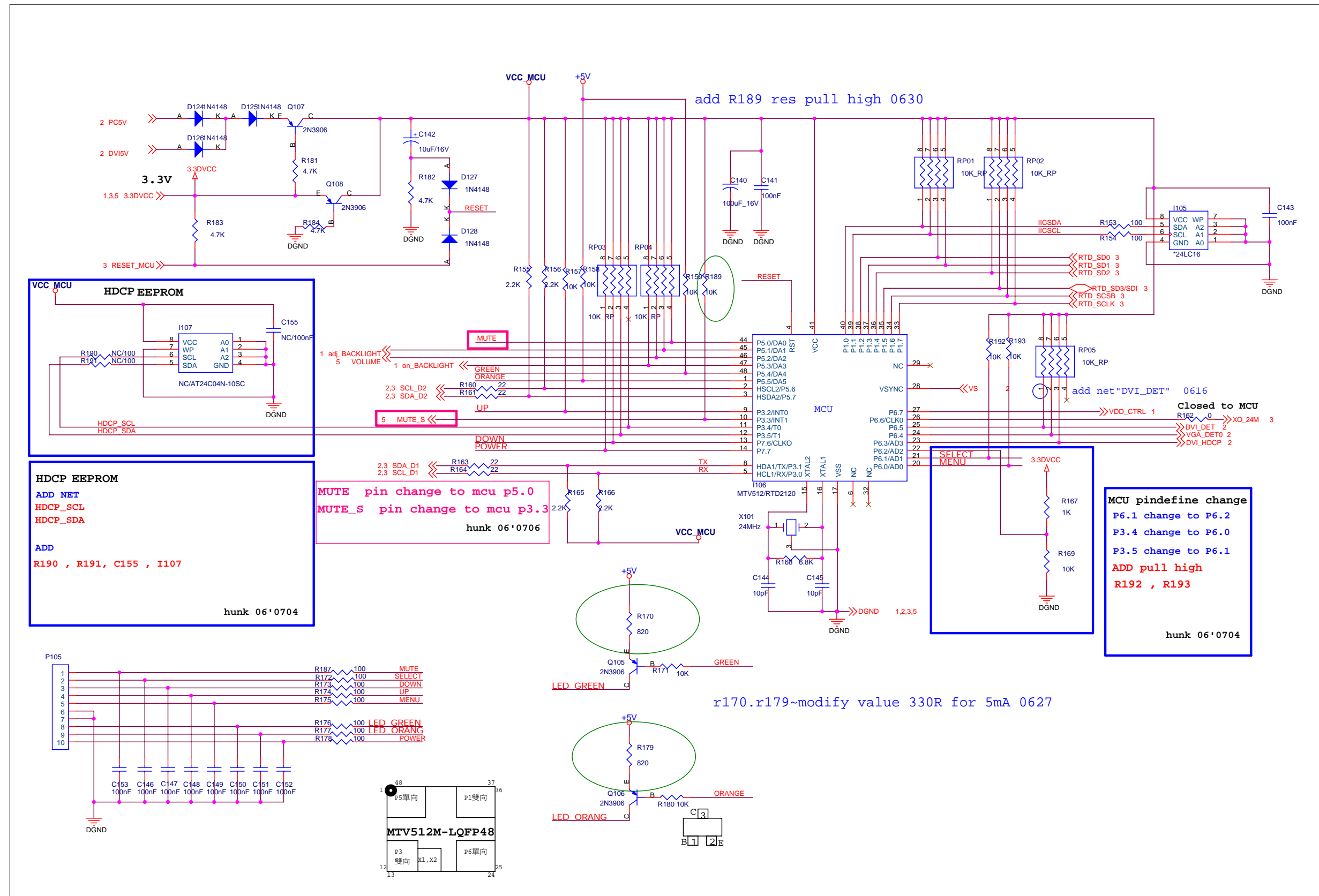
8.2. INPUT



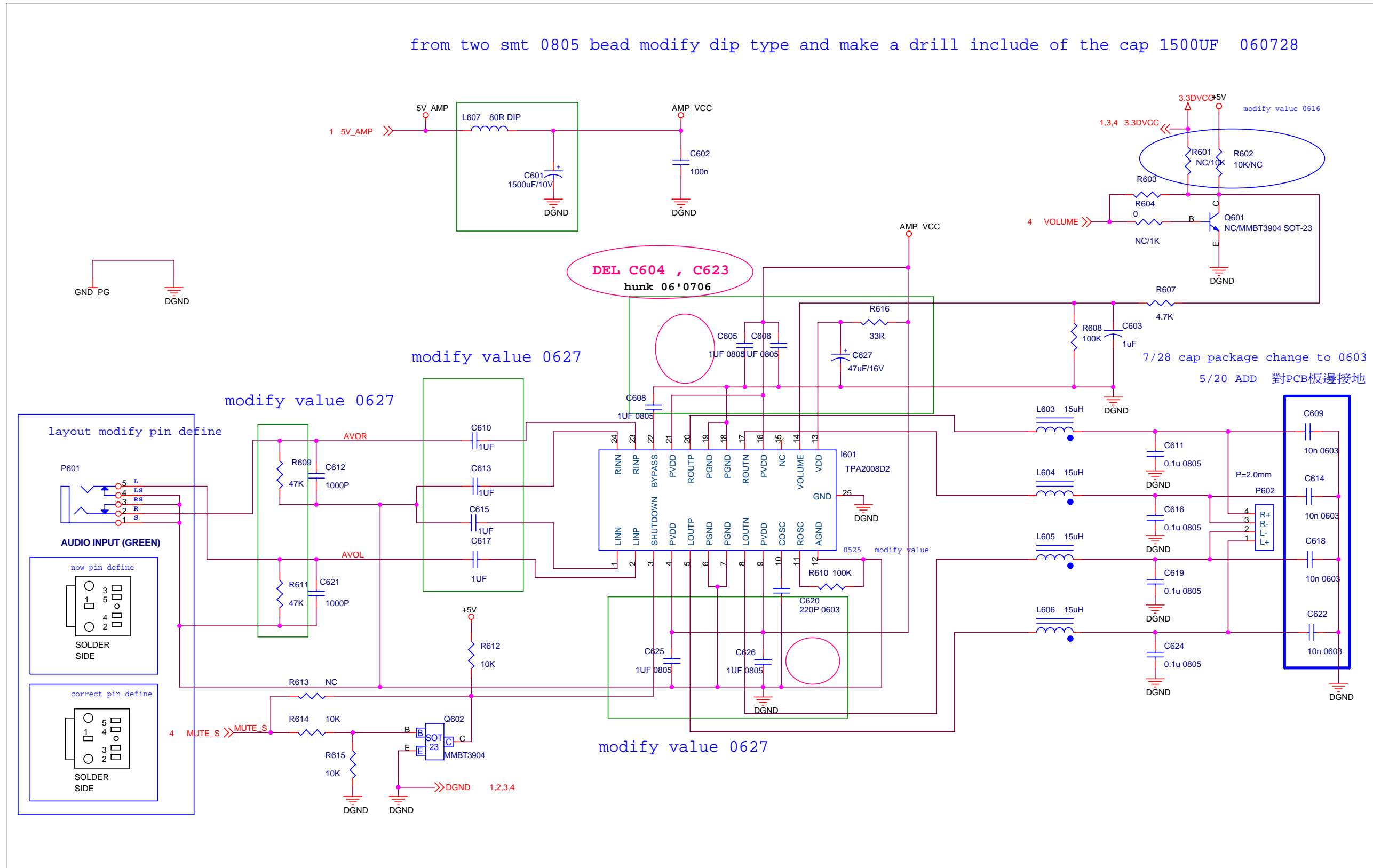
8.3. SCALER



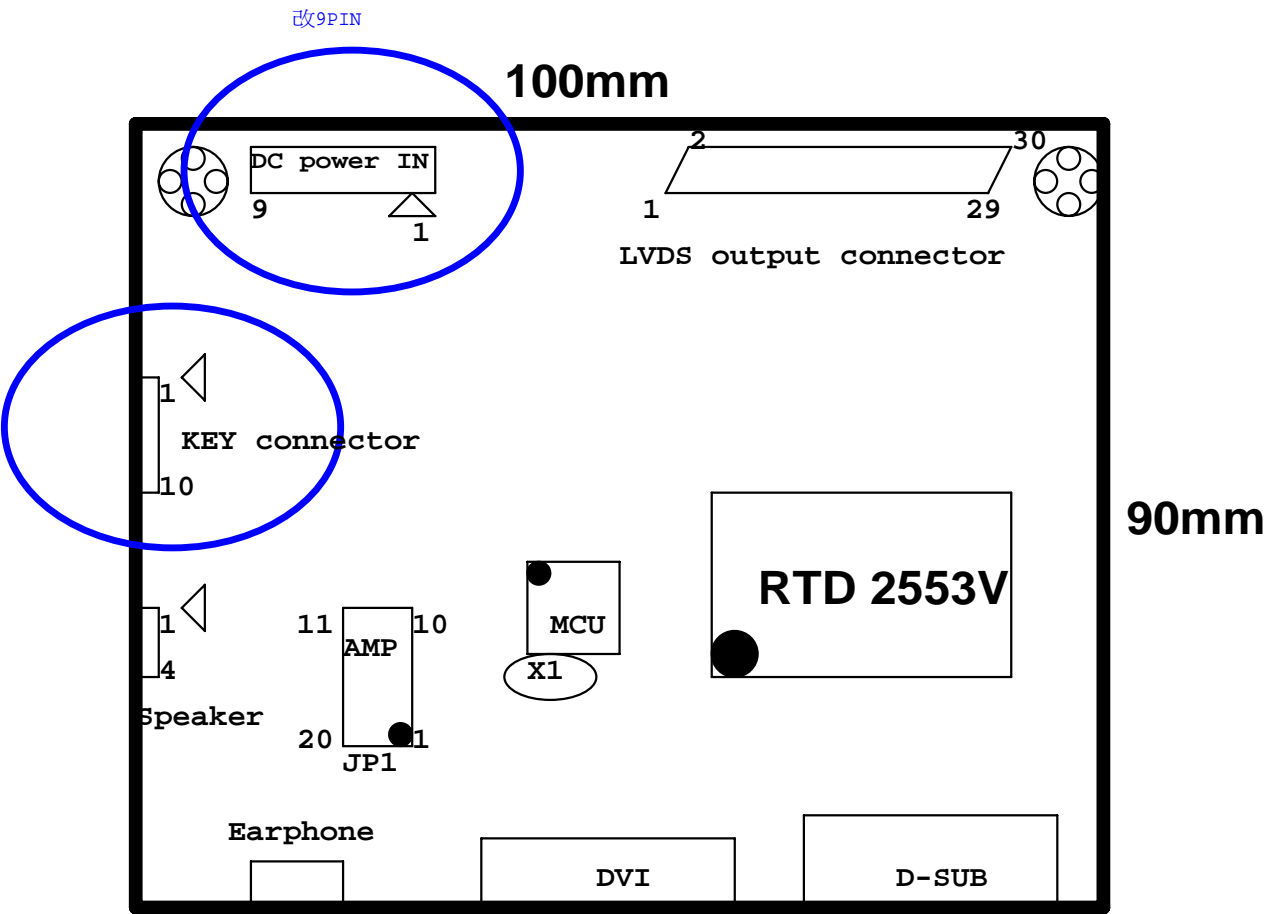
## 8.4. MCU



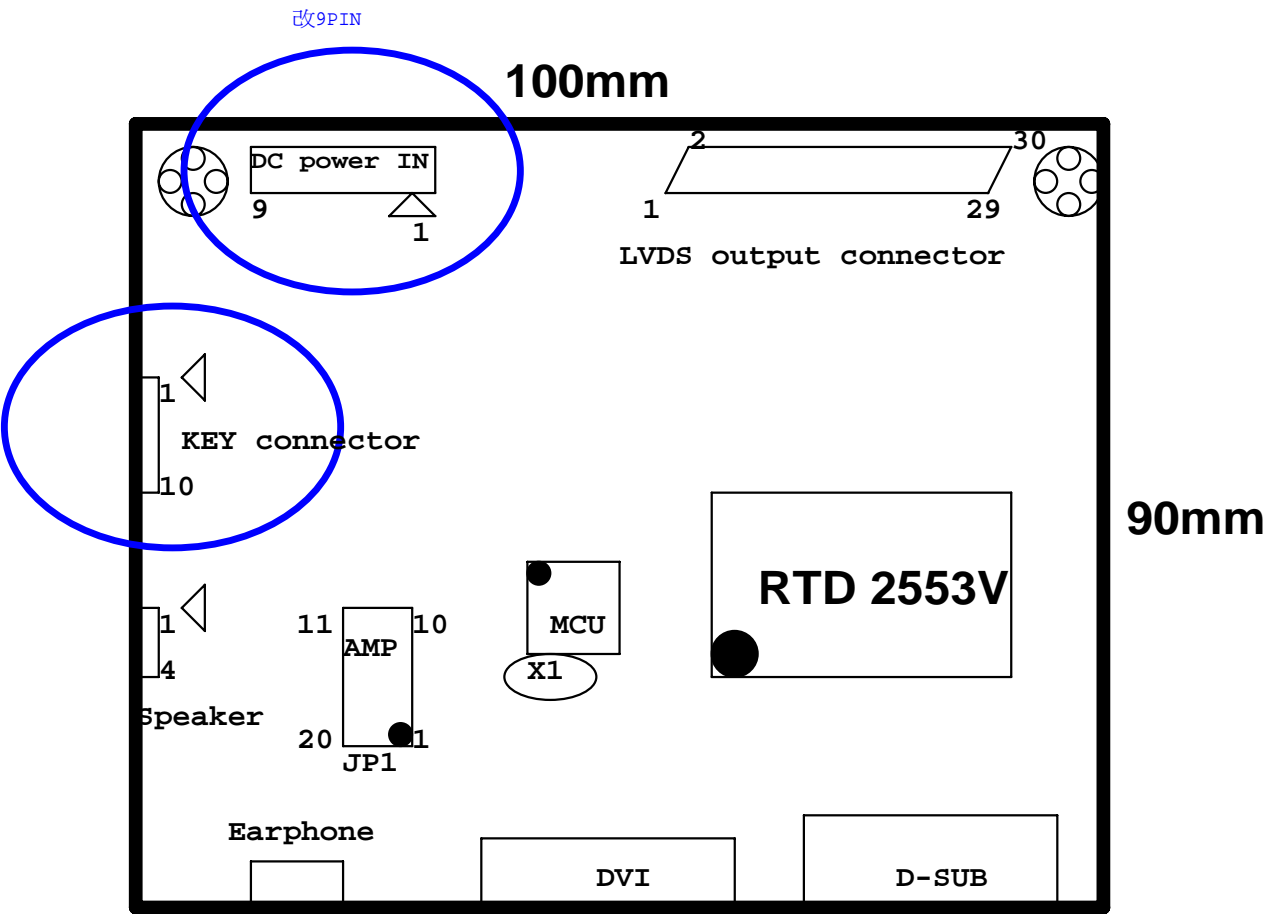
8.5. Audio Amplifier



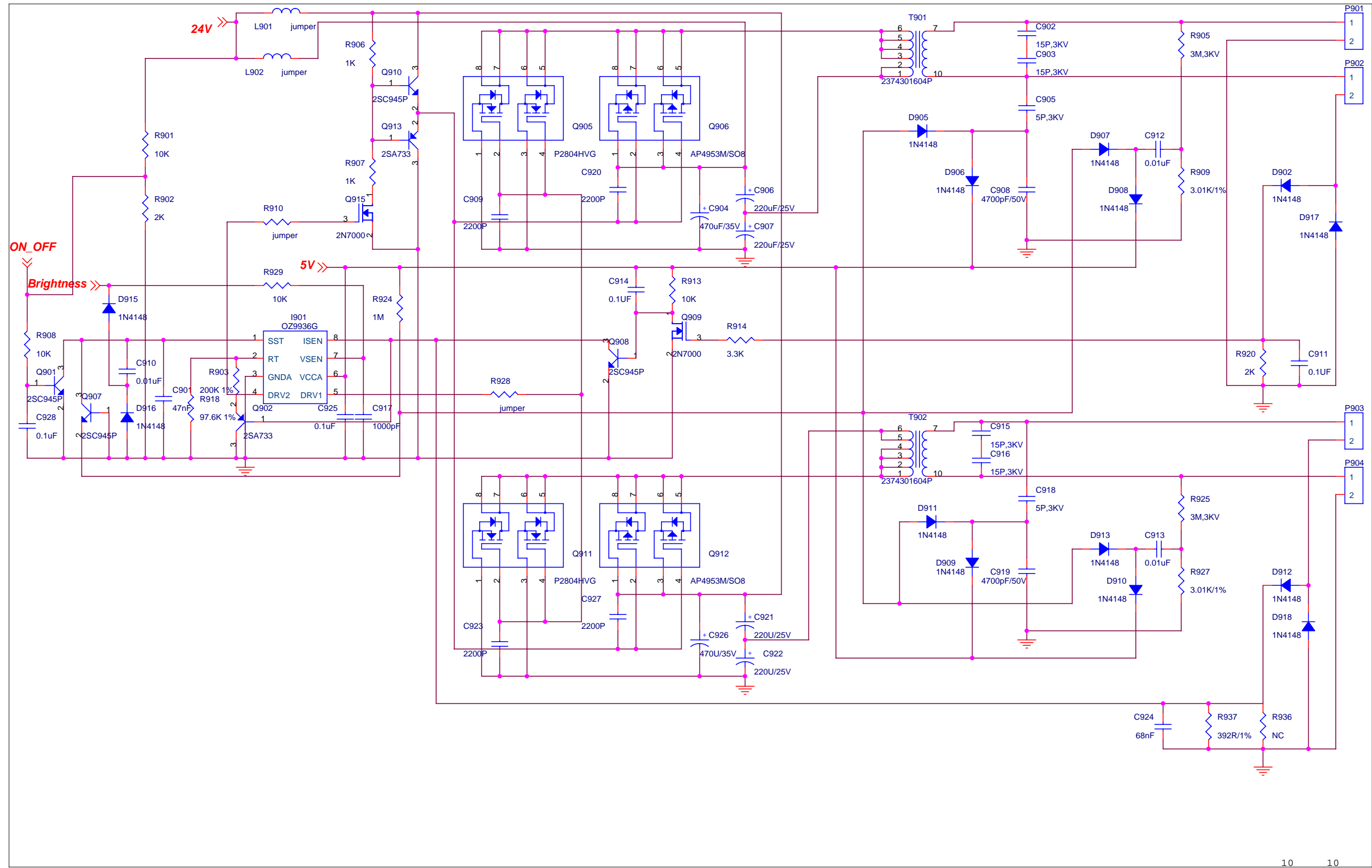
8.6. PLACEMENT



8.6. PLACEMENT

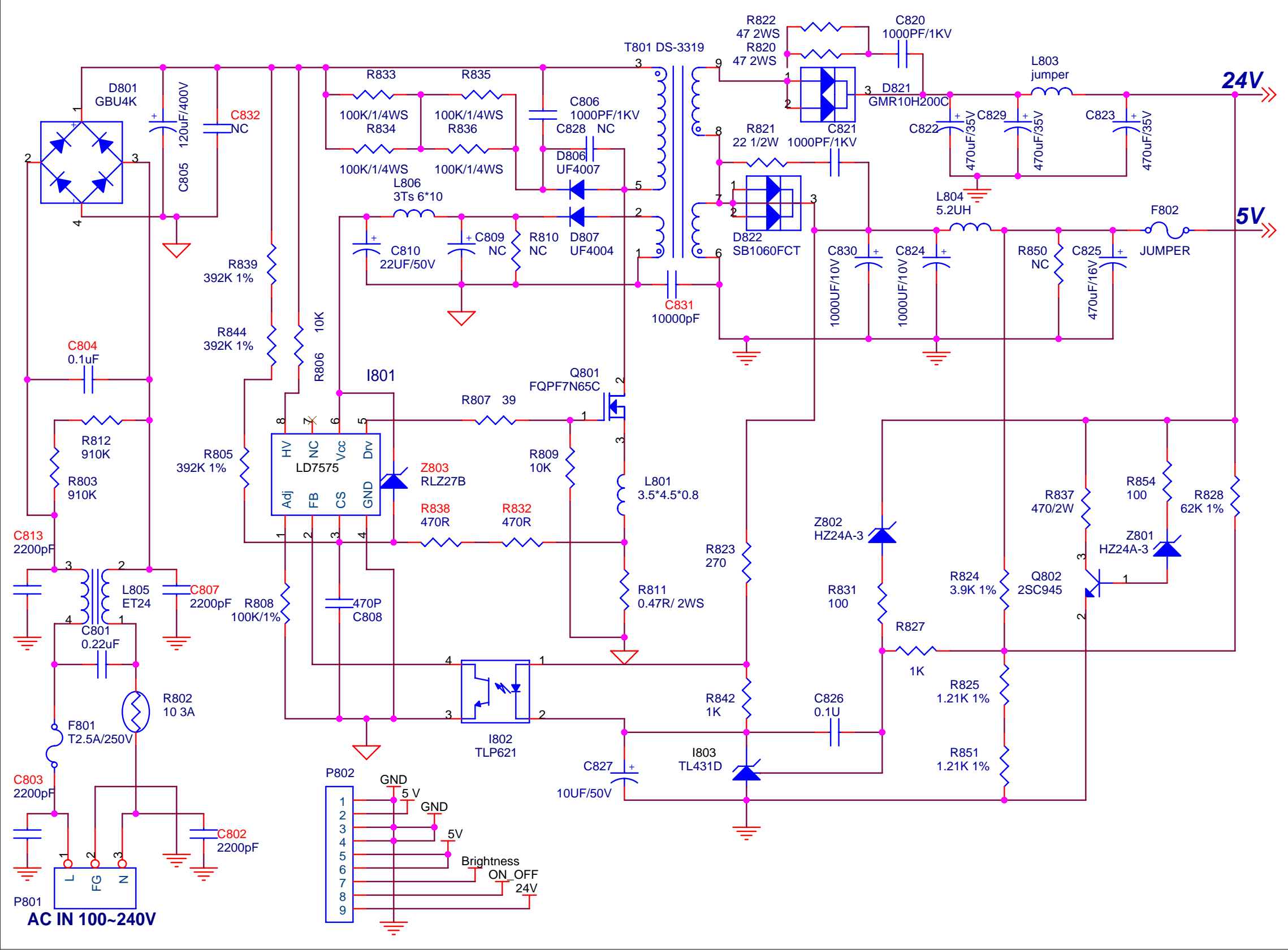


8.8. INVERTER



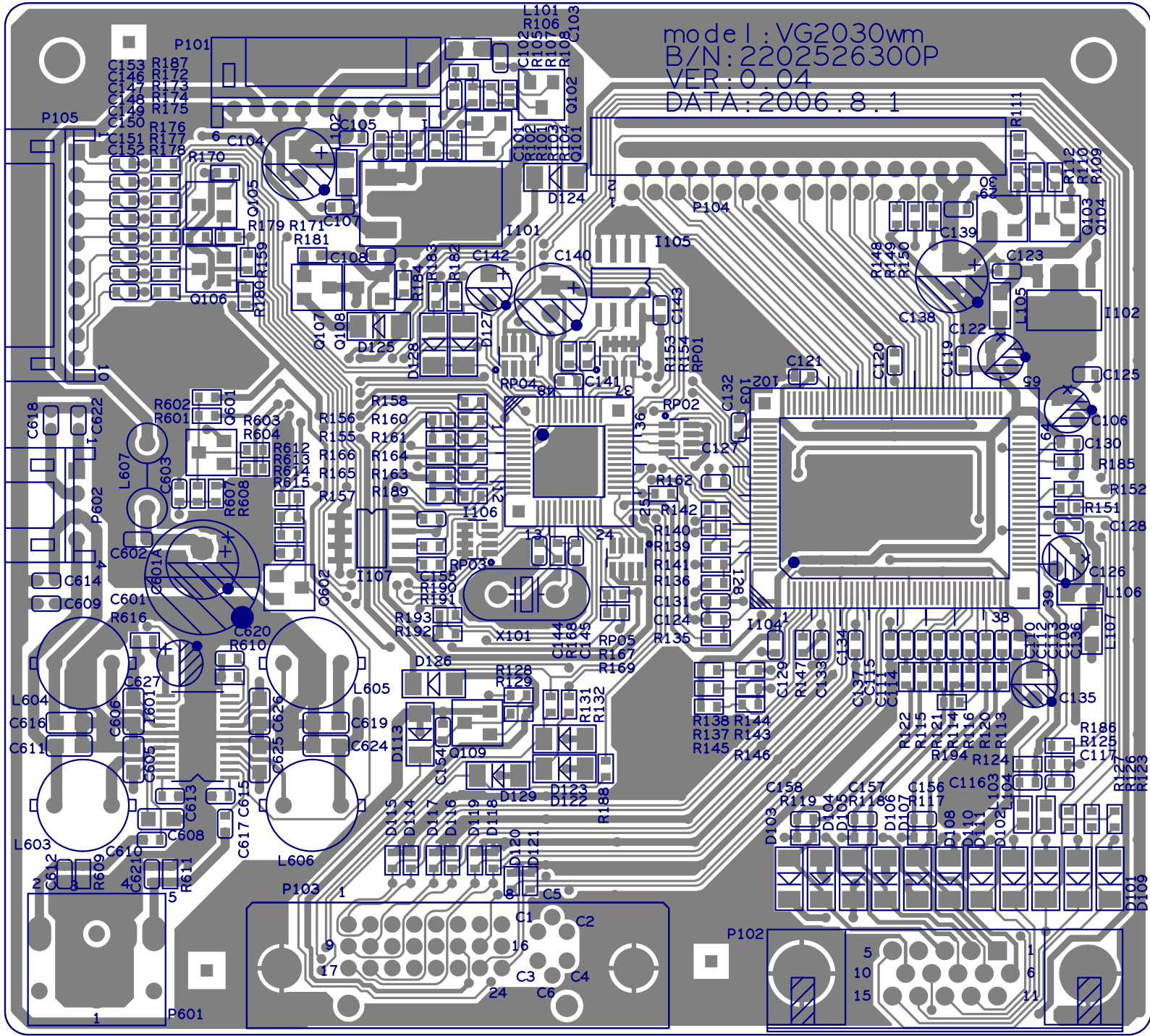


8.9. POWER

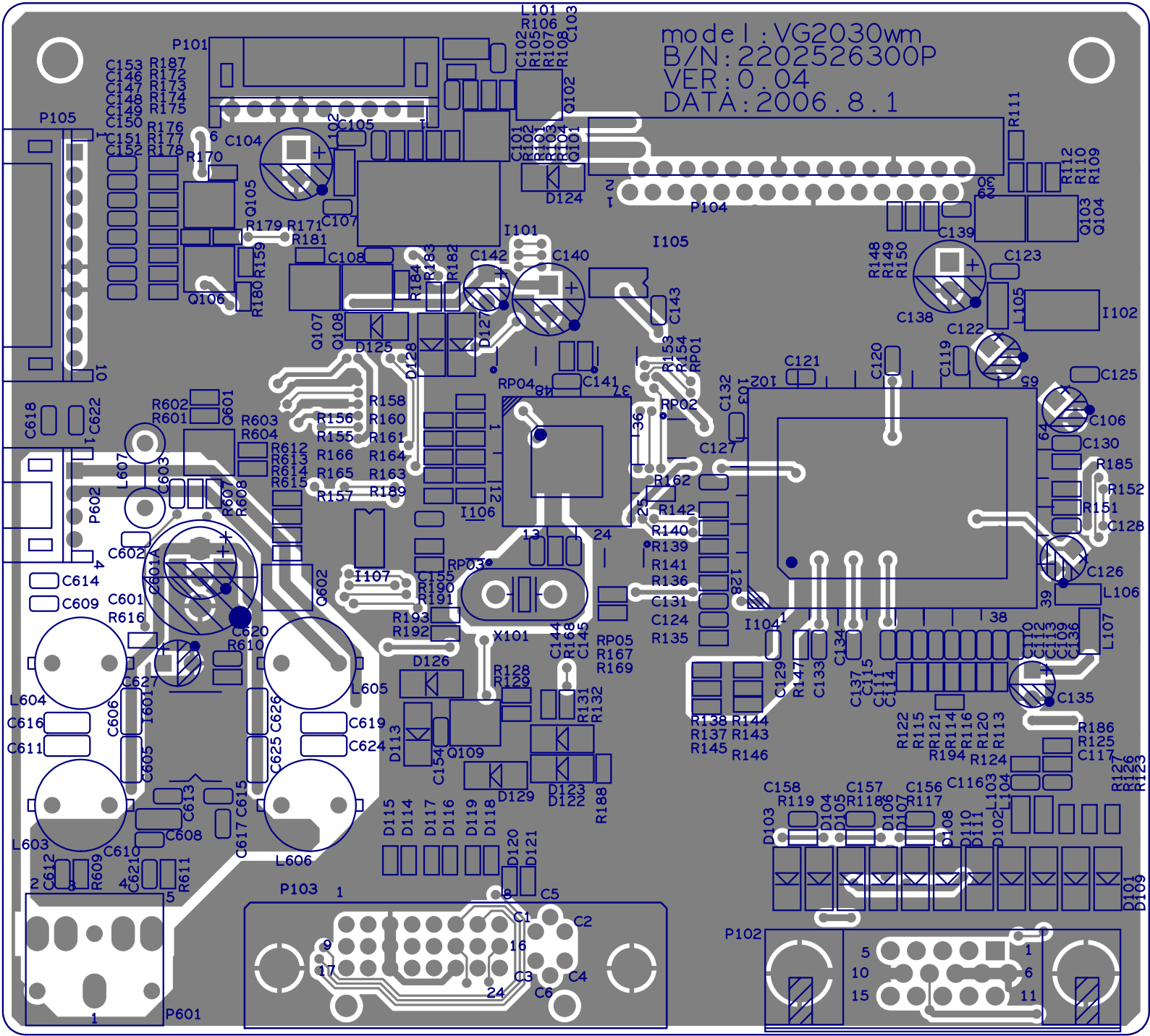


9. PCB Layout Diagrams

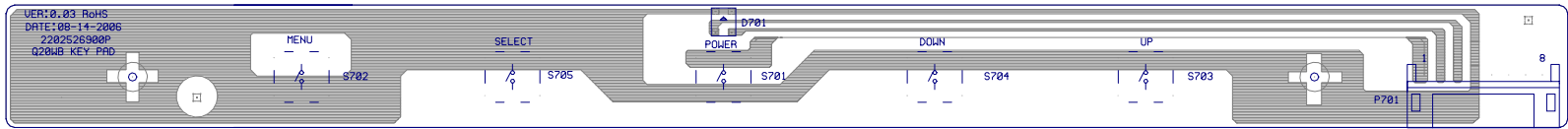
9.1. MAIN PCB TOP VIEW



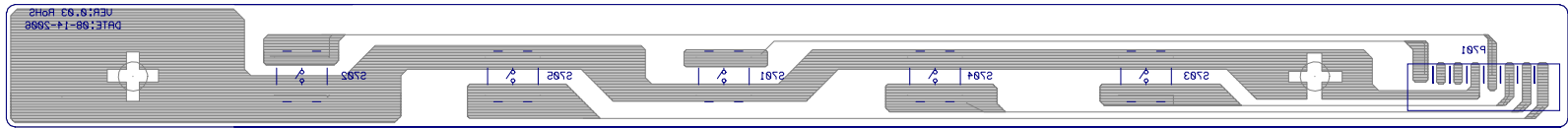
9.2. MAIN PCB BOTTOM VIEW



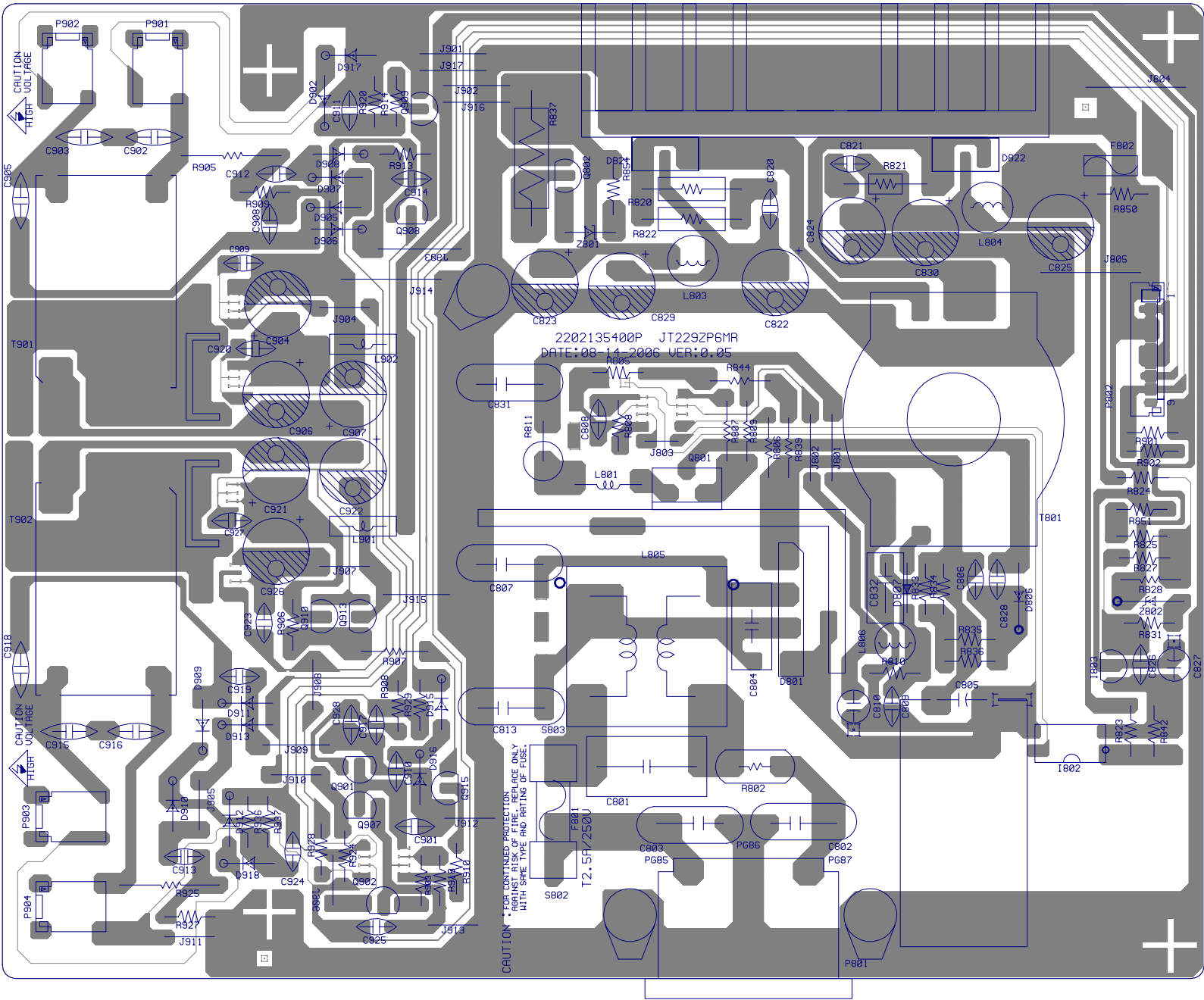
9.3. CON PCB TOP VIEW



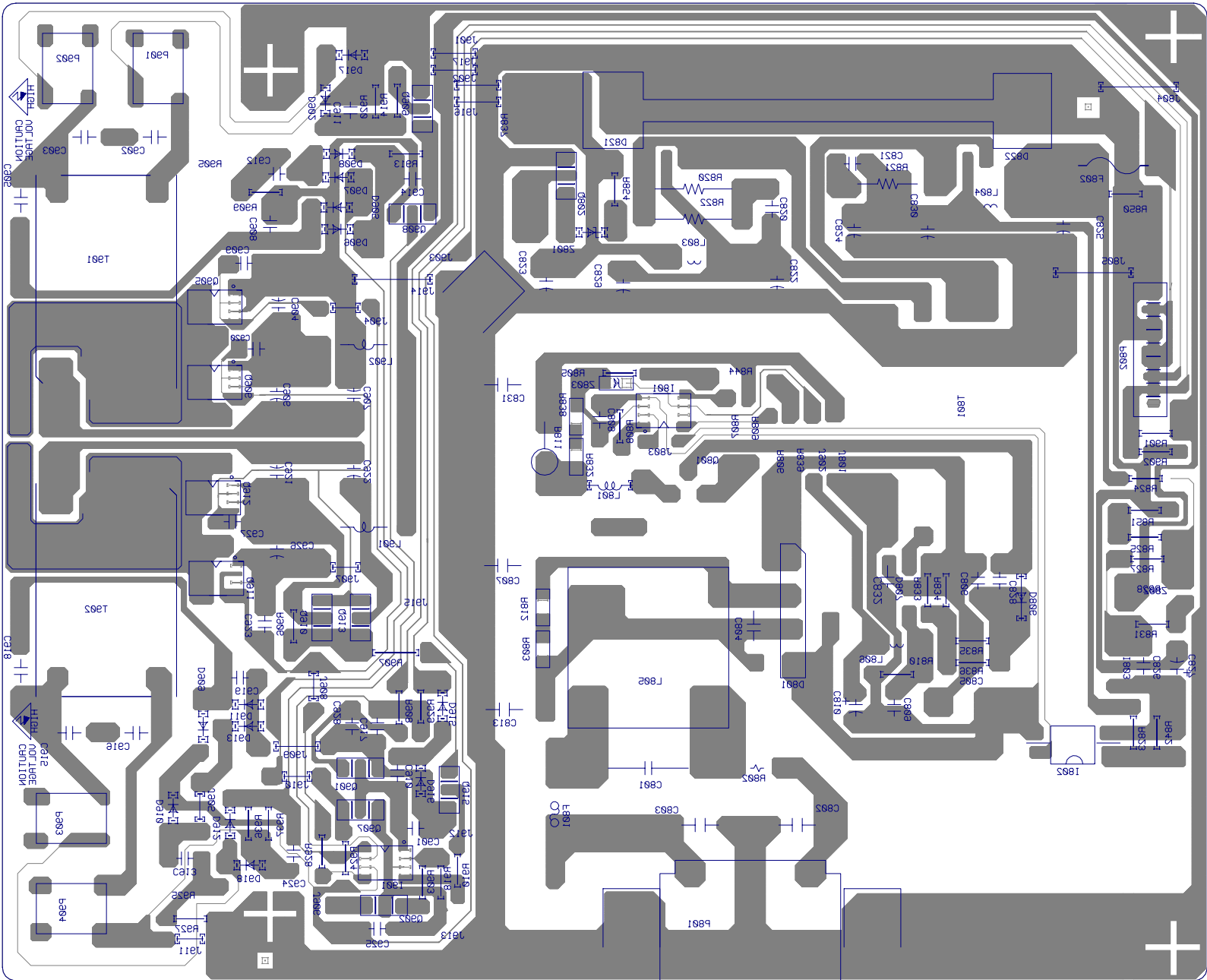
9.4. CON PCB BOTTOM VIEW



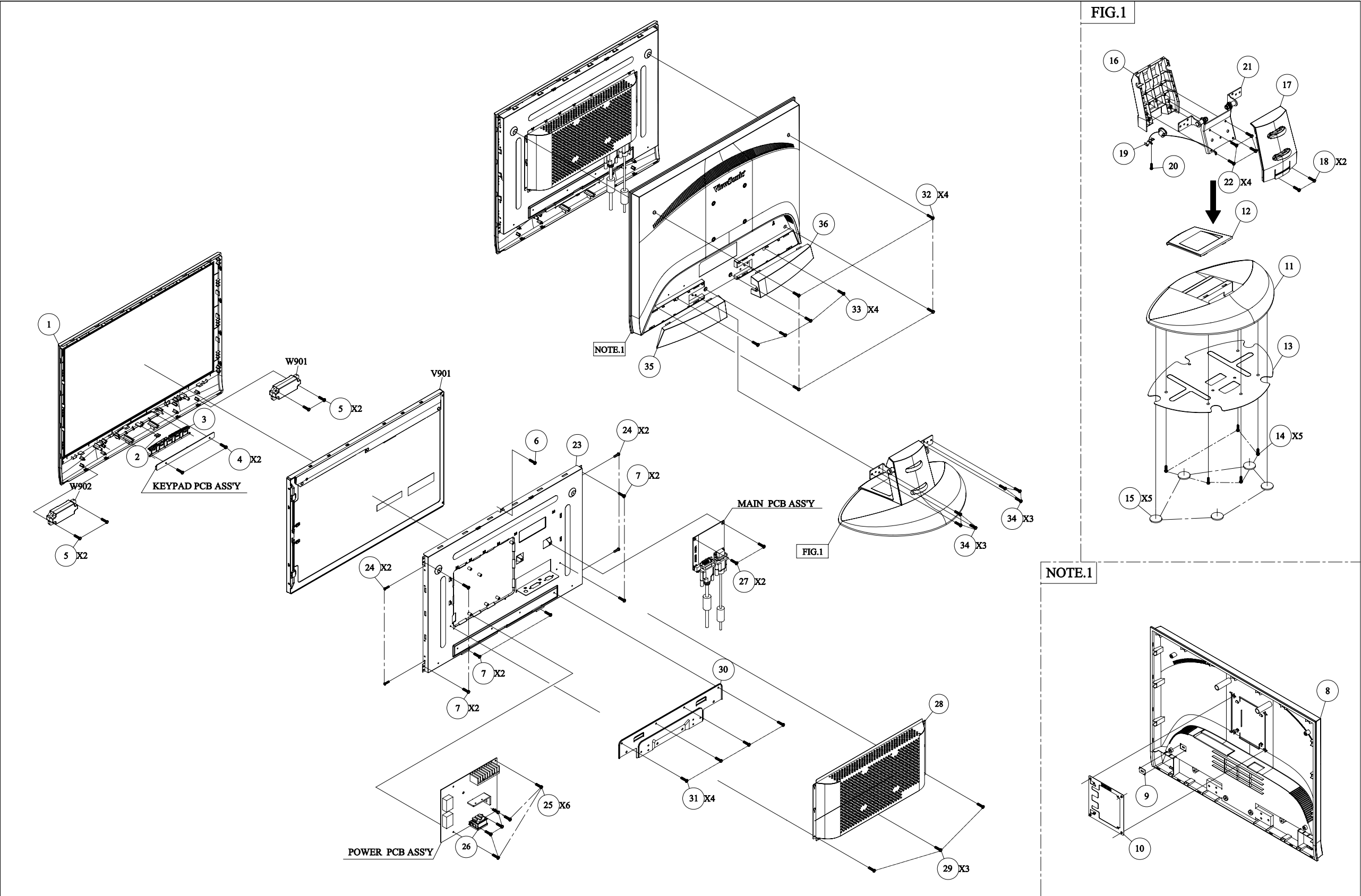
9.5. POWER PCB TOP VIEW

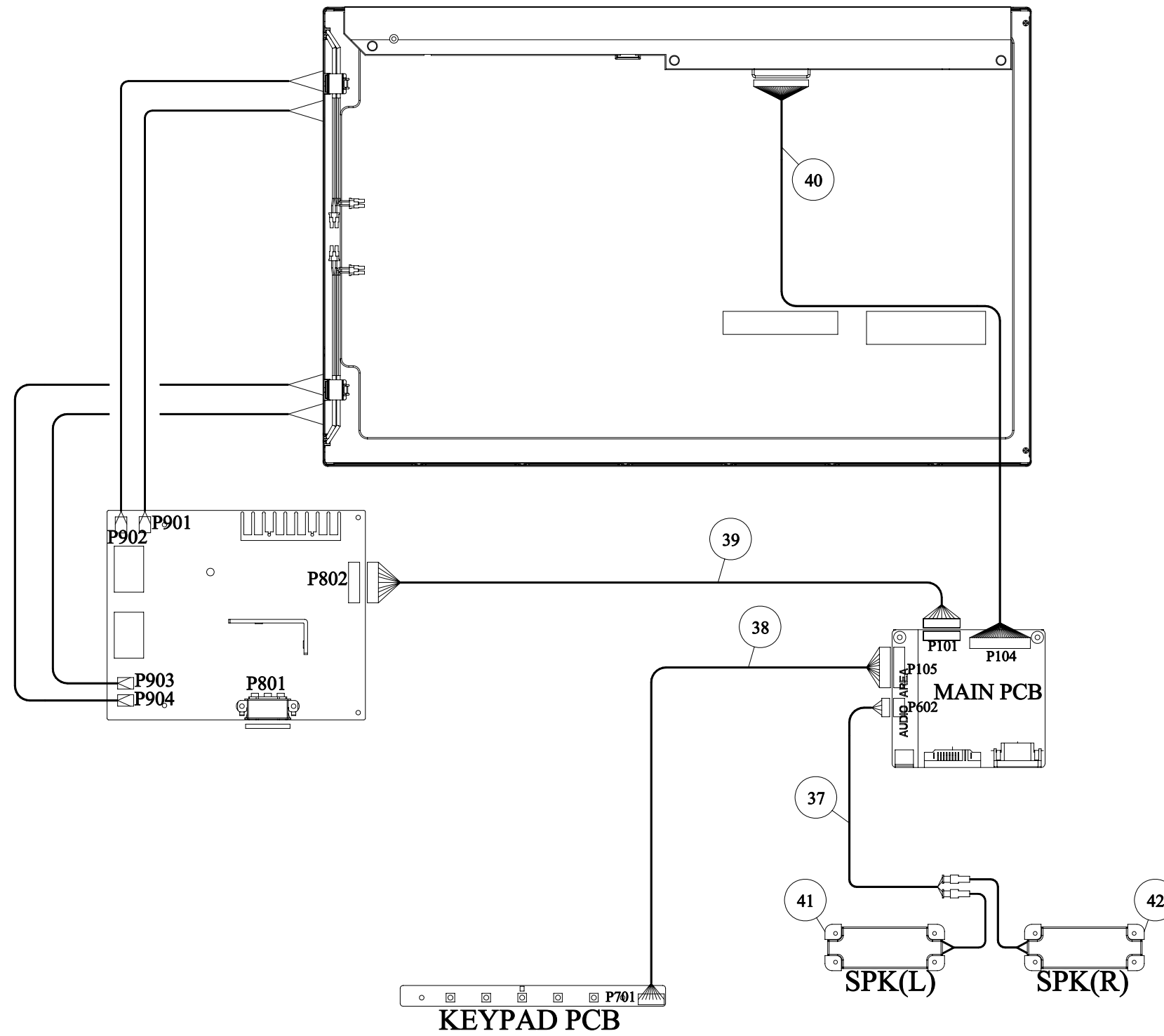


9.6. POWER PCB BOTTOM VIEW



10. Exploded Diagram and Exploded Parts List







## EXPLODED PARTS LIST (VX2235wm-3)

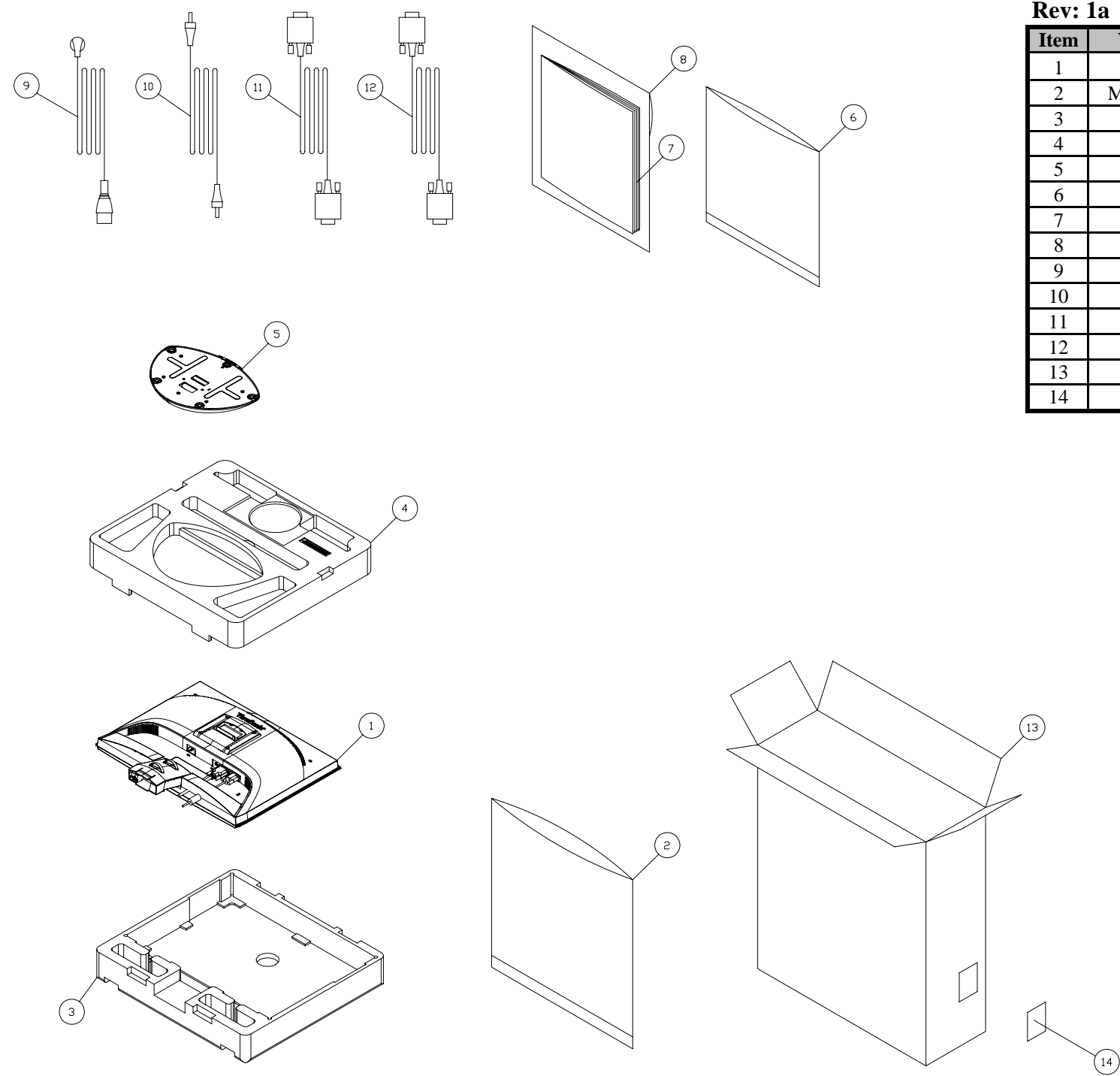
**ViewSonic Model Number: VS11446**

**Rev: 1a**

**Serial No. Prefix: QCZ**

| Item | ViewSonic P/N   | Ref. P/N    | Description                                | Q'ty |
|------|-----------------|-------------|--|------|
| 1    | N/A             | 2024275301P | FRONT BEZEL VX2235/ABS 94HB BLACK C        | 1    |
| 2    | N/A             | 2053756401P | LED INDIC.-PWR VX2035/PMMA 94HB            | 1    |
| 3    | N/A             | 2044270901P | FUNCTION KEY VX2235 ABS 94HB BLACK C       | 1    |
| 4    | M-SCW-0824-0285 | 2084730082P | SCREW,BND T+ M3X8(BND T+)                  | 2    |
| 5    | M-SCW-0824-0285 | 2084730082P | SCREW,BND T+ M3X8(BND T+)                  | 4    |
| 6    | M-SCW-0824-0285 | 2084730082P | SCREW,BND T+ M3X8(BND T+)                  | 1    |
| 7    | N/A             | 2084740082P | SCREW,BND T+ M4X8(BND T+)                  | 6    |
| 8    | N/A             | 2022270301P | CABI BACK VX2235/ABS HB BLACK C+PS-7604B   | 1    |
| 9    | M-BK-0805-0070  | 2071869400P | BRACKET, FIX METAL PLATE 1.0MM KENSINGTON  | 1    |
| 10   | HW-00003031     | 2071872900P | BRACKET, FIX JT198QP SECC 0.8T WALL MOUNT  | 1    |
| 11   | PL-00008054     | 2028263001P | STAND VX2035/ABS 94HB BLACK C              | 1    |
| 12   | N/A             | 2027267502P | DUST COVER VX2035 ABS 94HB PS-7604B        | 1    |
| 13   | N/A             | 2071885000P | BRACKET, FIX VX2035_BASE-METAL SECC T=1MM  | 1    |
| 14   | N/A             | 2083740082P | SCREW,BND T+ M4*8(BND T+)                  | 5    |
| 15   | PL-PD-0714-0113 | 2039819301P | FOOT PAD RUBBER O20*2TMM SQUARE GRAIN      | 5    |
| 16   | N/A             | 2028556202P | NECK VX2035/ARM-F ABS 94HB PS-7604B        | 1    |
| 17   | N/A             | 2028556302P | NECK VX2035/ARM-B ABS 94HB PS-7604B        | 1    |
| 18   | M-SCW-0824-0285 | 2084730082P | SCREW,BND T+ M3X8(BND T+)                  | 2    |
| 19   | N/A             | 2105252400P | SPRING PLATE PB-CU T:0.2MM                 | 1    |
| 20   | M-SCW-0824-0812 | 2084730062P | SCREW,BND T+ M3X6(BND T+)                  | 1    |
| 21   | N/A             | 2106659700P | HINGE(RA) VX2235 HINGE -5~+15' (TL)        | 1    |
| 21   | N/A             | 2106659701P | HINGE(RB) VX2235 HINGE -5~+20' (HY)        | 1    |
| 21   | N/A             | 2106659702P | HINGE(RC) VX2235 HINGE -5'~+20' (ZJ)       | 1    |
| 22   | M-SCW-0824-0123 | 2084740102P | SCREW,BND T+ M4X10(BND T+)                 | 4    |
| 23   | N/A             | 2071983400P | METAL FITTG VX2235 SECC T=0.8MM            | 1    |
| 24   | M-SCW-0824-6715 | 2080002200P | SCREW,SPE L355 M3x6 DH NICKEL-PLATED       | 4    |
| 25   | M-SCW-0824-0811 | 2080003700P | SCREW,SPE ISZZTER001A M3*6L MSWR17/FZMYI   | 6    |
| 26   | HW-00003028     | 2071874300P | BRACKET, FIX SECC T=0.8 VE910 ACINLET      | 1    |
| 27   | M-SCW-0824-0811 | 2080003700P | SCREW,SPE ISZZTER001A M3*6L MSWR17/FZMYI   | 2    |
| 28   | N/A             | 2071678900P | SHIELD PLATE VX2235 DUAL SPTE T=0.3MM      | 1    |
| 29   | M-SCW-0824-6719 | 2082630062P | SCREW M3X6 P=0.5                           | 3    |
| 30   | N/A             | 2071885100P | BRACKET, FIX VX2235 HINGE FIX SECC T=1.0MM | 1    |
| 31   | M-SCW-0824-6719 | 2082630062P | SCREW M3X6 P=0.5                           | 4    |
| 32   | M-SCW-0824-0123 | 2084740102P | SCREW,BND T+ M4X10(BND T+)                 | 4    |
| 33   | N/A             | 2082630064P | SCREW M3*6 P=0.5 BLACK                     | 4    |
| 34   | M-SCW-0824-0440 | 2085740102P | SCREW, B OTW+ SCREW, B OTW+ M4*10          | 6    |
| 35   | N/A             | 2027267001P | DUST COVER VX2235 ABS 94HB BLACK C (R)     | 1    |
| 36   | N/A             | 2027267101P | DUST COVER VX2235 ABS 94HB BLACK C (L)     | 1    |
| 37   | N/A             | 2427404032P | WIRE HARNESS 2+2/4P H/A 1007#24 L=250mm    | 1    |
| 38   | N/A             | 2427410008P | WIRE HARNESS 8/10P H/B 1007#26 L=300mm     | 1    |
| 39   | N/A             | 2427409004P | WIRE HARNESS 9/9P H/B 1007#26 L=130mm      | 1    |
| 40   | N/A             | 2420330181P | FFC CABLE 30P*P0.5*L157mm                  | 1    |
| 41   | E-00008181      | 2391302502P | SPEAKER ASS'Y 2.5W/4ohm(L) L80*W29*H20 D.L | 1    |
| 42   | E-00008180      | 2391302501P | SPEAKER ASS'Y 2.5W/4ohm(R) L80*W29*H20 D.L | 1    |

Packing for Shipping



PACKING PART LIST (VX2235wm-3 )

ViewSonic Model Number: VS11446

Rev: 1a

| Item | ViewSonic P/N  | Ref. P/N    | Location            | Q'ty |
|------|----------------|-------------|---------------------|------|
| 1    |                |             | VX2235WM3 monitor   | 1    |
| 2    | M-MS-0808-1317 | 2013053000P | POLYETHY BAG        | 1    |
| 3    | P-00008192     | 2012195500P | VX2235 EPS (BOTTOM) | 1    |
| 4    | P-00008193     | 2012195600P | VX2235 EPS (TOP)    | 1    |
| 5    |                |             | BASE ASS'Y          | 1    |
| 6    | P-00008078     | 2013228805P | POLYETHY BAG        | 1    |
| 7    | DC-00008155    | 2438501252P | OWNER GUIDE         | 1    |
| 8    | DC-00008154    | 2002310604P | GUARANT CARD(QSG)   | 1    |
| 9    | A-00005362     | 2427130046P | AC POWER CORD       | 1    |
| 10   | CB-00005735    | 2427721841P | EAR CABLE           | 1    |
| 11   | CB-00006182    | 2427501198P | DVI CABLE           | 1    |
| 12   | CB-00005507    | 2427501195P | VGA CABLE           | 1    |
| 13   | P-00008191     | 2011122301P | CARTON BOX          | 1    |
| 14   | N/A            | 2055632226P | LABEL               | 1    |

## 11. Recommended Spare Parts List

### RECOMMENDED SPARE PARTS LIST (VX2235wm-3)

ViewSonic Model Number: VS11446

Serial No. Prefix: QCZ

Rev: 1a

| Item | Description        | ECR/ECN | ViewSonic P/N  | Ref. P/N        | Location | Universal number# |
|------|--------------------|---------|----------------|-----------------|----------|-------------------|
| 1    | Accessories:       |         |                |                 |          |                   |
| 2    |                    |         | A-00005362     | 2427130046P     | P951     |                   |
| 3    |                    |         | A-00006132     | 2427130097P     | P951     |                   |
| 4    | PC Board Assembly: |         |                |                 |          |                   |
| 5    |                    |         | B-00008180     | 6201-7922904001 |          |                   |
| 6    |                    |         | B-00008181     | 6202-7922904001 |          |                   |
| 7    |                    |         | B-00008182     | 6204-7922904001 |          |                   |
| 8    | Cabinets:          |         |                |                 |          |                   |
| 9    |                    |         | C-00008198     | 2603308120      |          |                   |
| 10   |                    |         | C-00008199     | 2603407722      |          |                   |
| 11   | Cables:            |         |                |                 |          |                   |
| 12   |                    |         | CB-00005507    | 2427501195P     | P961     |                   |
| 13   |                    |         | CB-00006182    | 2427501198P     | P971     |                   |
| 14   | Documentation:     |         |                |                 |          |                   |
| 15   |                    |         | DC-00008154    | 2002310604P     | 6P81     |                   |
| 16   |                    |         | DC-00008155    | 2438501252P     | 6P80     |                   |
| 17   | Electronic         |         |                |                 |          |                   |
| 18   |                    |         | E-00006218     | 2212011500P     | V901     |                   |
| 19   | Components:        |         |                |                 |          |                   |
| 20   |                    |         | E-00008180     | 2391302501P     | W902     |                   |
| 21   |                    |         | E-00008181     | 2391302502P     | W901     |                   |
| 22   | Packing Material:  |         |                |                 |          |                   |
| 23   |                    |         | M-MS-0808-1317 | 2013053000P     | 6P60     |                   |
| 24   |                    |         | P-00008191     | 2011122301P     | 6P01     |                   |
| 25   |                    |         | P-00008192     | 2012195500P     | 6P20     |                   |
| 26   |                    |         | P-00008193     | 2012195600P     | 6P21     |                   |
| 27   | Plastics:          |         |                |                 |          |                   |
| 28   |                    |         | PL-00008054    | 2028263001P     | 5B01     |                   |

Remark 1: Above listed items are examples, supplier can expand the rows to add more necessary items.

Remark 2: All revised RSPLs with newly added items or any change made should be highlighted and correlated with the ECN/ECR approved by ViewSonic Corporation.  
This is to eliminate repeated cross checks of each item between this version and prior versions.

## BOM LIST (VX2235wm-3)

ViewSonic Model Number: VS11446

Rev: 1a

Serial No. Prefix: QCZ

| Item | ViewSonic P/N   | Ref. P/N    | Description                                | Location | Universal number# | Q'ty |
|------|-----------------|-------------|--|----------|-------------------|------|
| 1    | DC-00008154     | 2002310604P | GUARANT CARD VIEWSONIC VX2235WM-3 QSG      | 6P81     |                   | 1    |
| 2    | P-00008191      | 2011122301P | CARTON BOX VIEWSONIC VX2235WM-3 VS11446    | 6P01     |                   | 1    |
| 3    | P-00008192      | 2012195500P | POLYFOAM VX2235 EPS (BOTTOM)               | 6P20     |                   | 1    |
| 4    | P-00008193      | 2012195600P | POLYFOAM VX2235 EPS (TOP)                  | 6P21     |                   | 1    |
| 5    | M-MS-0808-1317  | 2013053000P | POLYETHY BAG 90CMX75CMX0.02t PE-LD         | 6P60     |                   | 1    |
| 6    | N/A             | 2013054020P | POLYETHY BAG 450*350MM T=0.03MM LDPE       | 6P75     |                   | 1    |
| 7    | N/A             | 2013228806P | POLYETHY BAG 150X250X0.03T mm LDPE VSC LCD | 6P85     |                   | 1    |
| 8    | N/A             | 2022270301P | CABI BACK VX2235/ABS HB BLACK C+PS-7604B   | 2C01     |                   | 1    |
| 9    | N/A             | 2024275301P | FRONT BEZEL VX2235/ABS 94HB BLACK C        | 1F01     |                   | 1    |
| 10   | N/A             | 2027267001P | DUST COVER VX2235 ABS 94HB BLACK C (R)     | 6B05     |                   | 1    |
| 11   | N/A             | 2027267101P | DUST COVER VX2235 ABS 94HB BLACK C (L)     | 6B06     |                   | 1    |
| 12   | N/A             | 2027267502P | DUST COVER VX2035 ABS 94HB PS-7604B        | 5B02     |                   | 1    |
| 13   | PL-00008054     | 2028263001P | STAND VX2035/ABS 94HB BLACK C              | 5B01     |                   | 1    |
| 14   | N/A             | 2028556202P | NECK VX2035/ARM-F ABS 94HB PS-7604B        | 5B08     |                   | 1    |
| 15   | N/A             | 2028556302P | NECK VX2035/ARM-B ABS 94HB PS-7604B        | 5B09     |                   | 1    |
| 16   | PL-PD-0714-0113 | 2039819301P | FOOT PAD RUBBER 020*2TMM SQUARE GRAIN      | 5B05     |                   | 5    |
| 17   | N/A             | 2044270901P | FUNCTION KEY VX2235 ABS 94HB BLACK C       | 1F03     |                   | 1    |
| 18   | M-MS-0808-9214  | 2051352100P | NAME PLATE VIEWSONIC E015-006 3-BIRD LOGO  | 1F04     |                   | 1    |
| 19   | N/A             | 2051352800P | NAME PLATE 38.00MM*5.90MM                  | 1F05     |                   | 1    |
| 20   | N/A             | 2053756401P | LED INDIC.-PWR VX2035/PMMA 94HB            | 1F02     |                   | 1    |
| 21   | N/A             | 2055134164P | LABEL VX2235WM-3 VS11446 AUO MPRII         | 6P50     |                   | 1    |
| 22   | N/A             | 2055613379P | LABEL VIEWSONIC CONTAINER LABEL            | 6P11     |                   | 1/48 |
| 23   | M-LB-0813-0959  | 2055613392P | LABEL VSC HIGH VOLTAGE WARNING LABEL       | 6P14     |                   | 1    |
| 24   | N/A             | 2055613522P | LABEL VX2235WM-3 STAND LABEL               | 5B50     |                   | 1    |
| 25   | N/A             | 2055613523P | LABEL VIEWSONIC 5MS STICKER                | 6P08     |                   | 1    |
| 26   | N/A             | 2055613528P | LABEL VIEWSONIC VX2235WM-3 POP LABEL       | 6P06     |                   | 1    |
| 27   | M-LB-0813-0530  | 2055617101P | LABEL 10*20 HI-POT TESTED OK               | 6P13     |                   | 1    |
| 28   | N/A             | 2055632228P | LABEL VX2235WM-1 VS11446 (G) AUO           | 6P02     |                   | 1    |
| 29   | N/A             | 2055636063P | LABEL VX2235WM-3 VS11446 SMALL LABEL       | 6P05     |                   | 1    |
| 30   | N/A             | 2055690060P | LABEL ENERGYSTAR LABEL 11X11MM NO PP       | 6P04     |                   | 1    |
| 31   | M-MS-0808-9408  | 2061453400P | BUSHING VE710 PLUG RUBBER                  | 2C04     |                   | 4    |
| 32   | N/A             | 2071678900P | SHIELD PLATE VX2235 DUAL SPTE T=0.3MM      | 5F07     |                   | 1    |
| 33   | M-BK-0805-0070  | 2071869400P | BRACKET, FIX METAL PLATE 1.0MM KENSINGTON  | 2C02     |                   | 1    |
| 34   | HW-00003031     | 2071872900P | BRACKET, FIX JT198QP SECC 0.8T WALL MOUNT  | 2C03     |                   | 1    |
| 35   | HW-00003028     | 2071874300P | BRACKET, FIX SECC T=0.8 VE910 ACINLET      | 5F04     |                   | 1    |
| 36   | N/A             | 2071885000P | BRACKET, FIX VX2035_BASE-METAL SECC T=1MM  | 5B03     |                   | 1    |
| 37   | N/A             | 2071885100P | BRACKET, FIX VX2235 HINGE FIX SECC T=1.0MM | 5F09     |                   | 1    |
| 38   | N/A             | 2071983400P | METAL FITTG VX2235 SECC T=0.8MM            | 5F01     |                   | 1    |
| 39   | N/A             | 2072253903P | HEAT SINK JT178DP SPTE T=1MM               | 9H03     |                   | 1    |
| 40   | N/A             | 2072253903P | HEAT SINK JT178DP SPTE T=1MM               | 9H04     |                   | 1    |
| 41   | N/A             | 2072259301P | HEAT SINK JC186H AL6063S-T5 69.5*20*25H    | 9H01     |                   | 1    |
| 42   | N/A             | 2072263101P | HEAT SINK AL 55L*24.5W*20HMM T=2.5         | 9H02     |                   | 1    |
| 43   | N/A             | 2074163001P | HOLDER VX2035-DOWN/ABS 94HB PS-7604B       | 5B16     |                   | 1    |
| 44   | N/A             | 2074163101P | HOLDER VX2035-UP/ABS 94HB PS-7604B         | 5B17     |                   | 1    |
| 45   | N/A             | 2080002200P | SCREW, SPE L355 M3x6 DH NICKEL-PLATED      | 5F02     |                   | 4    |
| 46   | M-SCW-0824-0811 | 2080003700P | SCREW, SPE ISZZTER001A M3*6L MSWR17/FZMYI  | 5F03     |                   | 6    |
| 47   | M-SCW-0824-0811 | 2080003700P | SCREW, SPE ISZZTER001A M3*6L MSWR17/FZMYI  | 5F05     |                   | 2    |
| 48   | N/A             | 2082630062P | SCREW M3X6 P=0.5                           | 5F08     |                   | 3    |
| 49   | N/A             | 2082630062P | SCREW M3X6 P=0.5                           | 5F10     |                   | 4    |
| 50   | N/A             | 2082630064P | SCREW M3*6 P=0.5 BLACK                     | 6B02     |                   | 4    |
| 51   | N/A             | 2083740082P | SCREW, BND T+ M4*8(BND T+)                 | 5B04     |                   | 5    |
| 52   | M-SCW-0824-0812 | 2084730062P | SCREW, BND T+ M3X6(BND T+)                 | 5B12     |                   | 1    |
| 53   | M-SCW-0824-0285 | 2084730082P | SCREW, BND T+ M3X8(BND T+)                 | 9S01     |                   | 1    |
| 54   | M-SCW-0824-0285 | 2084730082P | SCREW, BND T+ M3X8(BND T+)                 | 9S02     |                   | 1    |
| 55   | M-SCW-0824-0285 | 2084730082P | SCREW, BND T+ M3X8(BND T+)                 | 9S03     |                   | 1    |
| 56   | M-SCW-0824-0285 | 2084730082P | SCREW, BND T+ M3X8(BND T+)                 | 1F06     |                   | 2    |
| 57   | M-SCW-0824-0285 | 2084730082P | SCREW, BND T+ M3X8(BND T+)                 | 1F07     |                   | 4    |
| 58   | M-SCW-0824-0285 | 2084730082P | SCREW, BND T+ M3X8(BND T+)                 | 1F08     |                   | 1    |
| 59   | M-SCW-0824-0285 | 2084730082P | SCREW, BND T+ M3X8(BND T+)                 | 5B10     |                   | 2    |
| 60   | N/A             | 2084740082P | SCREW, BND T+ M4X8(BND T+)                 | 1F09     |                   | 6    |
| 61   | M-SCW-0824-0123 | 2084740102P | SCREW, BND T+ M4X10(BND T+)                | 5B15     |                   | 4    |
| 62   | M-SCW-0824-0123 | 2084740102P | SCREW, BND T+ M4X10(BND T+)                | 6B01     |                   | 4    |
| 63   | M-SCW-0824-0440 | 2085740102P | SCREW, B OTW+ SCREW, B OTW+ M4*10          | 6B03     |                   | 6    |
| 64   | M-00003554      | 2097400301P | EYELET BSS3-1/2H T=0.25 SN 3uM             | PG85     |                   | 1    |
| 65   | M-00003554      | 2097400301P | EYELET BSS3-1/2H T=0.25 SN 3uM             | PG86     |                   | 1    |
| 66   | M-00003554      | 2097400301P | EYELET BSS3-1/2H T=0.25 SN 3uM             | PG87     |                   | 1    |
| 67   | N/A             | 2105251400P | SPRING PLATE SPTE T=0.4MM (GROUND PLATE)   | 9H10     |                   | 3    |
| 68   | N/A             | 2105252400P | SPRING PLATE PB-CU T:0.2MM                 | 5B11     |                   | 1    |
| 69   | N/A             | 2106659700P | HINGE VX2235 HINGE -5~+15' (TL)            | 5B13 RA  |                   | 1    |
| 70   | N/A             | 2106659701P | HINGE VX2235 HINGE -5~+20' (HY)            | 5B13 RB  |                   | 1    |
| 71   | N/A             | 2106659702P | HINGE VX2235 HINGE -5~+20' (ZJ)            | 5B13 RC  |                   | 1    |
| 72   | N/A             | 2202135400P | PC BOARD JT229ZP6MR P/B FR1 196*146        | U801     |                   | 1    |
| 73   | N/A             | 2202526300P | PCB MULTILAYER VG2030VW-1 M/B FR4*2 90*100 | U101     |                   | 1    |
| 74   | N/A             | 2202526900P | PCB MULTILAYER Q20WB K/B FR4*2 185*14.5    | U701     |                   | 1    |
| 75   | E-00006218      | 2212011500P | LCD PANEL M220EW01 V.0 AUO                 | V901     |                   | 1    |
| 76   | E-FS-0410-0009  | 2213125207P | FUSE 21502.5(2.5A) LITTEL                  | F801 RA  |                   | 1    |
| 77   | E-FS-0410-0102  | 2213125211P | FUSE FUSE 2.5A/250V SG501302.5 PICO        | F801 RB  |                   | 1    |
| 78   | E-TH-0416-0042  | 2229201212P | THERMISTOR, PTH SCK-103 THINKING           | R802     |                   | 1    |
| 79   | E-R-0405-1757   | 2233410195P | RES, CBN 1/4 S RD 1/4WS 100 ohm J T52      | R831     |                   | 1    |

| Item | ViewSonic P/N | Ref. P/N    | Description                                 | Location | Universal number# | Q'ty |
|------|---------------|-------------|---|----------|-------------------|------|
| 80   | E-R-0405-1757 | 2233410195P | RES,CBN 1/4 S RD 1/4WS 100 ohm J T52        | R854     |                   | 1    |
| 81   | E-R-0405-3235 | 2233410295P | RES,CBN 1/4 S RD 1/4WS 1Kohm J T52          | R827     |                   | 1    |
| 82   | E-R-0405-3235 | 2233410295P | RES,CBN 1/4 S RD 1/4WS 1Kohm J T52          | R842     |                   | 1    |
| 83   | E-R-0405-3235 | 2233410295P | RES,CBN 1/4 S RD 1/4WS 1Kohm J T52          | R906     |                   | 1    |
| 84   | E-R-0405-3235 | 2233410295P | RES,CBN 1/4 S RD 1/4WS 1Kohm J T52          | R907     |                   | 1    |
| 85   | E-R-0405-3214 | 2233410395P | RES,CBN 1/4 S RD 1/4WS 10Kohm J T52         | R806     |                   | 1    |
| 86   | E-R-0405-3214 | 2233410395P | RES,CBN 1/4 S RD 1/4WS 10Kohm J T52         | R809     |                   | 1    |
| 87   | E-R-0405-3214 | 2233410395P | RES,CBN 1/4 S RD 1/4WS 10Kohm J T52         | R908     |                   | 1    |
| 88   | E-R-0405-3214 | 2233410395P | RES,CBN 1/4 S RD 1/4WS 10Kohm J T52         | R913     |                   | 1    |
| 89   | E-R-0405-3214 | 2233410395P | RES,CBN 1/4 S RD 1/4WS 10Kohm J T52         | R929     |                   | 1    |
| 90   | E-R-0405-3221 | 2233410495P | RES,CBN 1/4 S RD 1/4WS 100Kohm J T52        | R833     |                   | 1    |
| 91   | E-R-0405-3221 | 2233410495P | RES,CBN 1/4 S RD 1/4WS 100Kohm J T52        | R834     |                   | 1    |
| 92   | E-R-0405-3221 | 2233410495P | RES,CBN 1/4 S RD 1/4WS 100Kohm J T52        | R835     |                   | 1    |
| 93   | E-R-0405-3221 | 2233410495P | RES,CBN 1/4 S RD 1/4WS 100Kohm J T52        | R836     |                   | 1    |
| 94   | E-R-0405-3213 | 2233410595P | RES,CBN 1/4 S RD 1/4WS 1.0Mohm J T52        | R924     |                   | 1    |
| 95   | E-R-0405-2309 | 2233420295P | RES,CBN 1/4 S RD 1/4WS 2.0Kohm J T52        | R920     |                   | 1    |
| 96   | N/A           | 2233427195P | RES,CBN 1/4 S RD 1/4WS 270 ohm J T52        | R823     |                   | 1    |
| 97   | N/A           | 2233433295P | RES,CBN 1/4 S RD 1/4WS 3.3Kohm J T52        | R914     |                   | 1    |
| 98   | N/A           | 2233439095P | RES,CBN 1/4 S RD 1/4WS 39 ohm J T52         | R807     |                   | 1    |
| 99   | N/A           | 2233622095P | RES,CBN 1/2WS RD 1/2WS 22 ohm J T52         | R821     |                   | 1    |
| 100  | N/A           | 2235547013P | RES,MTL 2 RS 2WS 47ohm J P=15.0             | R820     |                   | 1    |
| 101  | N/A           | 2235547013P | RES,MTL 2 RS 2WS 47ohm J P=15.0             | R822     |                   | 1    |
| 102  | N/A           | 2235647113P | RES,MTL 3 RS 3WS 470ohm J P=20.0            | R837     |                   | 1    |
| 103  | N/A           | 2239210035P | RES,PRES 1/4 S RN 1/4WS 100.00K F T52 MINI  | R808     |                   | 1    |
| 104  | N/A           | 2239212115P | RES,PRES 1/4 S RN 1/4WS 1.21Kohm F T        | R825     |                   | 1    |
| 105  | N/A           | 2239212115P | RES,PRES 1/4 S RN 1/4WS 1.21Kohm F T        | R851     |                   | 1    |
| 106  | N/A           | 2239230115P | RES,PRES 1/4S RN 1/4WS 3.01K F T52          | R909     |                   | 1    |
| 107  | N/A           | 2239230115P | RES,PRES 1/4S RN 1/4WS 3.01K F T52          | R927     |                   | 1    |
| 108  | N/A           | 2239239205P | RES,PRES 1/4 S RN 1/4WS 392 ohm F T52       | R937     |                   | 1    |
| 109  | N/A           | 2239239215P | RES,PRES 1/4S RN 1/4WS 3.92Kohm F T52       | R824     |                   | 1    |
| 110  | N/A           | 2239239235P | RES,PRES 1/4S RN 1/4WS 392Kohm F T52        | R805     |                   | 1    |
| 111  | N/A           | 2239239235P | RES,PRES 1/4S RN 1/4WS 392Kohm F T52        | R839     |                   | 1    |
| 112  | N/A           | 2239239235P | RES,PRES 1/4S RN 1/4WS 392Kohm F T52        | R844     |                   | 1    |
| 113  | N/A           | 2239262025P | RES,PRES 1/4 S RN 1/4WS 62.00K F T52 MINI   | R828     |                   | 1    |
| 114  | N/A           | 2239297625P | RES,PRES 1/4S RN 1/4WS 97.6Kohm F T52       | R918     |                   | 1    |
| 115  | N/A           | 2241247816P | RES,WIR 2 RW 2WS 0.47 ohm P=7.0 J           | R811     |                   | 1    |
| 116  | N/A           | 2242330595P | HIGH VOLTAGE RESISTOR RD 1/2W 3.0Mohm J T52 | R905     |                   | 1    |
| 117  | N/A           | 2242330595P | HIGH VOLTAGE RESISTOR RD 1/2W 3.0Mohm J T52 | R925     |                   | 1    |
| 118  | E-R-0405-6600 | 2253200096P | RES CHIP 1/10W RC 0603 1/10W 0 ohm J T      | R103     |                   | 1    |
| 119  | E-R-0405-6600 | 2253200096P | RES CHIP 1/10W RC 0603 1/10W 0 ohm J T      | R107     |                   | 1    |
| 120  | E-R-0405-6600 | 2253200096P | RES CHIP 1/10W RC 0603 1/10W 0 ohm J T      | R128     |                   | 1    |
| 121  | E-R-0405-6600 | 2253200096P | RES CHIP 1/10W RC 0603 1/10W 0 ohm J T      | R135     |                   | 1    |
| 122  | E-R-0405-6600 | 2253200096P | RES CHIP 1/10W RC 0603 1/10W 0 ohm J T      | R139     |                   | 1    |
| 123  | E-R-0405-6600 | 2253200096P | RES CHIP 1/10W RC 0603 1/10W 0 ohm J T      | R148     |                   | 1    |
| 124  | E-R-0405-6600 | 2253200096P | RES CHIP 1/10W RC 0603 1/10W 0 ohm J T      | R150     |                   | 1    |
| 125  | E-R-0405-6600 | 2253200096P | RES CHIP 1/10W RC 0603 1/10W 0 ohm J T      | R162     |                   | 1    |
| 126  | E-R-0405-6600 | 2253200096P | RES CHIP 1/10W RC 0603 1/10W 0 ohm J T      | R186     |                   | 1    |
| 127  | E-R-0405-6600 | 2253200096P | RES CHIP 1/10W RC 0603 1/10W 0 ohm J T      | R603     |                   | 1    |
| 128  | N/A           | 2253210196P | RES CHIP 1/10W RC 0603 1/10W 100 ohm J T    | L104     |                   | 1    |
| 129  | N/A           | 2253210196P | RES CHIP 1/10W RC 0603 1/10W 100 ohm J T    | R102     |                   | 1    |
| 130  | N/A           | 2253210196P | RES CHIP 1/10W RC 0603 1/10W 100 ohm J T    | R106     |                   | 1    |
| 131  | N/A           | 2253210196P | RES CHIP 1/10W RC 0603 1/10W 100 ohm J T    | R123     |                   | 1    |
| 132  | N/A           | 2253210196P | RES CHIP 1/10W RC 0603 1/10W 100 ohm J T    | R126     |                   | 1    |
| 133  | N/A           | 2253210196P | RES CHIP 1/10W RC 0603 1/10W 100 ohm J T    | R127     |                   | 1    |
| 134  | N/A           | 2253210196P | RES CHIP 1/10W RC 0603 1/10W 100 ohm J T    | R131     |                   | 1    |
| 135  | N/A           | 2253210196P | RES CHIP 1/10W RC 0603 1/10W 100 ohm J T    | R132     |                   | 1    |
| 136  | N/A           | 2253210196P | RES CHIP 1/10W RC 0603 1/10W 100 ohm J T    | R153     |                   | 1    |
| 137  | N/A           | 2253210196P | RES CHIP 1/10W RC 0603 1/10W 100 ohm J T    | R154     |                   | 1    |
| 138  | N/A           | 2253210196P | RES CHIP 1/10W RC 0603 1/10W 100 ohm J T    | R172     |                   | 1    |
| 139  | N/A           | 2253210196P | RES CHIP 1/10W RC 0603 1/10W 100 ohm J T    | R173     |                   | 1    |
| 140  | N/A           | 2253210196P | RES CHIP 1/10W RC 0603 1/10W 100 ohm J T    | R174     |                   | 1    |
| 141  | N/A           | 2253210196P | RES CHIP 1/10W RC 0603 1/10W 100 ohm J T    | R175     |                   | 1    |
| 142  | N/A           | 2253210196P | RES CHIP 1/10W RC 0603 1/10W 100 ohm J T    | R176     |                   | 1    |
| 143  | N/A           | 2253210196P | RES CHIP 1/10W RC 0603 1/10W 100 ohm J T    | R177     |                   | 1    |
| 144  | N/A           | 2253210196P | RES CHIP 1/10W RC 0603 1/10W 100 ohm J T    | R178     |                   | 1    |
| 145  | N/A           | 2253210196P | RES CHIP 1/10W RC 0603 1/10W 100 ohm J T    | R187     |                   | 1    |
| 146  | N/A           | 2253210196P | RES CHIP 1/10W RC 0603 1/10W 100 ohm J T    | R188     |                   | 1    |
| 147  | E-R-0405-6410 | 2253210296P | RES CHIP 1/10W RC 0603 1/10W 1.0Kohm J T    | R101     |                   | 1    |
| 148  | E-R-0405-6410 | 2253210296P | RES CHIP 1/10W RC 0603 1/10W 1.0Kohm J T    | R129     |                   | 1    |
| 149  | E-R-0405-6410 | 2253210296P | RES CHIP 1/10W RC 0603 1/10W 1.0Kohm J T    | R147     |                   | 1    |
| 150  | E-R-0405-6410 | 2253210296P | RES CHIP 1/10W RC 0603 1/10W 1.0Kohm J T    | R167     |                   | 1    |
| 151  | E-R-0405-6410 | 2253210296P | RES CHIP 1/10W RC 0603 1/10W 1.0Kohm J T    | R185     |                   | 1    |
| 152  | N/A           | 2253210396P | RES CHIP 1/10W RC 0603 1/10W 10Kohm J T     | R112     |                   | 1    |
| 153  | N/A           | 2253210396P | RES CHIP 1/10W RC 0603 1/10W 10Kohm J T     | R157     |                   | 1    |
| 154  | N/A           | 2253210396P | RES CHIP 1/10W RC 0603 1/10W 10Kohm J T     | R158     |                   | 1    |
| 155  | N/A           | 2253210396P | RES CHIP 1/10W RC 0603 1/10W 10Kohm J T     | R159     |                   | 1    |
| 156  | N/A           | 2253210396P | RES CHIP 1/10W RC 0603 1/10W 10Kohm J T     | R169     |                   | 1    |
| 157  | N/A           | 2253210396P | RES CHIP 1/10W RC 0603 1/10W 10Kohm J T     | R171     |                   | 1    |
| 158  | N/A           | 2253210396P | RES CHIP 1/10W RC 0603 1/10W 10Kohm J T     | R180     |                   | 1    |
| 159  | N/A           | 2253210396P | RES CHIP 1/10W RC 0603 1/10W 10Kohm J T     | R189     |                   | 1    |
| 160  | N/A           | 2253210396P | RES CHIP 1/10W RC 0603 1/10W 10Kohm J T     | R192     |                   | 1    |
| 161  | N/A           | 2253210396P | RES CHIP 1/10W RC 0603 1/10W 10Kohm J T     | R193     |                   | 1    |
| 162  | N/A           | 2253210396P | RES CHIP 1/10W RC 0603 1/10W 10Kohm J T     | R602     |                   | 1    |
| 163  | N/A           | 2253210396P | RES CHIP 1/10W RC 0603 1/10W 10Kohm J T     | R612     |                   | 1    |

| Item | ViewSonic P/N | Ref. P/N    | Description                                 | Location | Universal number# | Q'ty |
|------|---------------|-------------|---|----------|-------------------|------|
| 164  | N/A           | 2253210396P | RES CHIP 1/10W RC 0603 1/10W 10Kohm J T     | R614     |                   | 1    |
| 165  | N/A           | 2253210396P | RES CHIP 1/10W RC 0603 1/10W 10Kohm J T     | R615     |                   | 1    |
| 166  | N/A           | 2253210496P | RES CHIP 1/10W RC 0603 1/10W 100Kohm J T    | R608     |                   | 1    |
| 167  | N/A           | 2253210496P | RES CHIP 1/10W RC 0603 1/10W 100Kohm J T    | R610     |                   | 1    |
| 168  | N/A           | 2253215396P | RES CHIP 1/10W RC 0603 1/10W 15Kohm J T     | R136     |                   | 1    |
| 169  | N/A           | 2253222096P | RES CHIP 1/10W RC 0603 1/10W 22 ohm J T     | R140     |                   | 1    |
| 170  | N/A           | 2253222096P | RES CHIP 1/10W RC 0603 1/10W 22 ohm J T     | R142     |                   | 1    |
| 171  | N/A           | 2253222096P | RES CHIP 1/10W RC 0603 1/10W 22 ohm J T     | R151     |                   | 1    |
| 172  | N/A           | 2253222096P | RES CHIP 1/10W RC 0603 1/10W 22 ohm J T     | R152     |                   | 1    |
| 173  | N/A           | 2253222096P | RES CHIP 1/10W RC 0603 1/10W 22 ohm J T     | R160     |                   | 1    |
| 174  | N/A           | 2253222096P | RES CHIP 1/10W RC 0603 1/10W 22 ohm J T     | R161     |                   | 1    |
| 175  | N/A           | 2253222096P | RES CHIP 1/10W RC 0603 1/10W 22 ohm J T     | R163     |                   | 1    |
| 176  | N/A           | 2253222096P | RES CHIP 1/10W RC 0603 1/10W 22 ohm J T     | R164     |                   | 1    |
| 177  | N/A           | 2253222196P | RES CHIP 1/10W RC 0603 1/10W 220 ohm J T    | R110     |                   | 1    |
| 178  | N/A           | 2253222296P | RES CHIP 1/10W RC 0603 1/10W 2.2Kohm J T    | R124     |                   | 1    |
| 179  | N/A           | 2253222296P | RES CHIP 1/10W RC 0603 1/10W 2.2Kohm J T    | R125     |                   | 1    |
| 180  | N/A           | 2253222296P | RES CHIP 1/10W RC 0603 1/10W 2.2Kohm J T    | R155     |                   | 1    |
| 181  | N/A           | 2253222296P | RES CHIP 1/10W RC 0603 1/10W 2.2Kohm J T    | R156     |                   | 1    |
| 182  | N/A           | 2253222296P | RES CHIP 1/10W RC 0603 1/10W 2.2Kohm J T    | R165     |                   | 1    |
| 183  | N/A           | 2253222296P | RES CHIP 1/10W RC 0603 1/10W 2.2Kohm J T    | R166     |                   | 1    |
| 184  | N/A           | 2253222396P | RES CHIP 1/10W RC 0603 1/10W 22Kohm J T     | R109     |                   | 1    |
| 185  | N/A           | 2253230396P | RES CHIP 1/10W RC 0603 1/10W 30Kohm J T     | R141     |                   | 1    |
| 186  | N/A           | 2253233096P | RES CHIP 1/10W RC 0603 1/10W 33 ohm J T     | R616     |                   | 1    |
| 187  | N/A           | 2253233196P | RES CHIP 1/10W RC 0603 1/10W 330 ohm J T    | R170     |                   | 1    |
| 188  | N/A           | 2253233196P | RES CHIP 1/10W RC 0603 1/10W 330 ohm J T    | R179     |                   | 1    |
| 189  | N/A           | 2253247196P | RES CHIP 1/10W RC 0603 1/10W 470 ohm J T    | R116     |                   | 1    |
| 190  | E-R-0405-6419 | 2253247296P | RES CHIP 1/10W RC 0603 1/10W 4.7Kohm J T    | R137     |                   | 1    |
| 191  | E-R-0405-6419 | 2253247296P | RES CHIP 1/10W RC 0603 1/10W 4.7Kohm J T    | R138     |                   | 1    |
| 192  | E-R-0405-6419 | 2253247296P | RES CHIP 1/10W RC 0603 1/10W 4.7Kohm J T    | R145     |                   | 1    |
| 193  | E-R-0405-6419 | 2253247296P | RES CHIP 1/10W RC 0603 1/10W 4.7Kohm J T    | R181     |                   | 1    |
| 194  | E-R-0405-6419 | 2253247296P | RES CHIP 1/10W RC 0603 1/10W 4.7Kohm J T    | R182     |                   | 1    |
| 195  | E-R-0405-6419 | 2253247296P | RES CHIP 1/10W RC 0603 1/10W 4.7Kohm J T    | R183     |                   | 1    |
| 196  | E-R-0405-6419 | 2253247296P | RES CHIP 1/10W RC 0603 1/10W 4.7Kohm J T    | R184     |                   | 1    |
| 197  | E-R-0405-6419 | 2253247296P | RES CHIP 1/10W RC 0603 1/10W 4.7Kohm J T    | R607     |                   | 1    |
| 198  | E-00003527    | 2253247396P | RES CHIP 1/10W RC 0603 1/10W 47Kohm J T     | R111     |                   | 1    |
| 199  | E-00003527    | 2253247396P | RES CHIP 1/10W RC 0603 1/10W 47Kohm J T     | R609     |                   | 1    |
| 200  | E-00003527    | 2253247396P | RES CHIP 1/10W RC 0603 1/10W 47Kohm J T     | R611     |                   | 1    |
| 201  | N/A           | 2253256096P | RES CHIP 1/10W RC 0603 1/10W 56 ohm J T     | R113     |                   | 1    |
| 202  | N/A           | 2253256096P | RES CHIP 1/10W RC 0603 1/10W 56 ohm J T     | R114     |                   | 1    |
| 203  | N/A           | 2253256096P | RES CHIP 1/10W RC 0603 1/10W 56 ohm J T     | R115     |                   | 1    |
| 204  | N/A           | 2253256096P | RES CHIP 1/10W RC 0603 1/10W 56 ohm J T     | R120     |                   | 1    |
| 205  | N/A           | 2253256096P | RES CHIP 1/10W RC 0603 1/10W 56 ohm J T     | R121     |                   | 1    |
| 206  | N/A           | 2253256096P | RES CHIP 1/10W RC 0603 1/10W 56 ohm J T     | R122     |                   | 1    |
| 207  | N/A           | 2253268296P | RES CHIP 1/10W RC 0603 1/10W 6.8Kohm J T    | R168     |                   | 1    |
| 208  | N/A           | 2253275096P | RES CHIP 1/10W RC 0603 1/10W 75 ohm J T     | L103     |                   | 1    |
| 209  | N/A           | 2253275096P | RES CHIP 1/10W RC 0603 1/10W 75 ohm J T     | R117     |                   | 1    |
| 210  | N/A           | 2253275096P | RES CHIP 1/10W RC 0603 1/10W 75 ohm J T     | R118     |                   | 1    |
| 211  | N/A           | 2253275096P | RES CHIP 1/10W RC 0603 1/10W 75 ohm J T     | R119     |                   | 1    |
| 212  | N/A           | 2253447196P | RES CHIP 1/4W RC 1206 1/4 W 470 ohm J T     | R832     |                   | 1    |
| 213  | N/A           | 2253447196P | RES CHIP 1/4W RC 1206 1/4 W 470 ohm J T     | R838     |                   | 1    |
| 214  | N/A           | 2253491496P | RES CHIP 1/4W RC 1206 1/4W 910Kohm J T      | R803     |                   | 1    |
| 215  | N/A           | 2253491496P | RES CHIP 1/4W RC 1206 1/4W 910Kohm J T      | R812     |                   | 1    |
| 216  | N/A           | 2259210308P | RES,CHIP NETWORKS 8P4R 1/16W 10Kohm J P=0.8 | RP01     |                   | 1    |
| 217  | N/A           | 2259210308P | RES,CHIP NETWORKS 8P4R 1/16W 10Kohm J P=0.8 | RP02     |                   | 1    |
| 218  | N/A           | 2259210308P | RES,CHIP NETWORKS 8P4R 1/16W 10Kohm J P=0.8 | RP03     |                   | 1    |
| 219  | N/A           | 2259210308P | RES,CHIP NETWORKS 8P4R 1/16W 10Kohm J P=0.8 | RP04     |                   | 1    |
| 220  | N/A           | 2259210308P | RES,CHIP NETWORKS 8P4R 1/16W 10Kohm J P=0.8 | RP05     |                   | 1    |
| 221  | N/A           | 2275415001P | CAP,CER TC 15p/3KV SL P=7.5 J C             | C902     |                   | 1    |
| 222  | N/A           | 2275415001P | CAP,CER TC 15p/3KV SL P=7.5 J C             | C903     |                   | 1    |
| 223  | N/A           | 2275415001P | CAP,CER TC 15p/3KV SL P=7.5 J C             | C915     |                   | 1    |
| 224  | N/A           | 2275415001P | CAP,CER TC 15p/3KV SL P=7.5 J C             | C916     |                   | 1    |
| 225  | N/A           | 2275450901P | CAP CER TC 5P/3KV SL P=7.5 J C              | C905     |                   | 1    |
| 226  | N/A           | 2275450901P | CAP CER TC 5P/3KV SL P=7.5 J C              | C918     |                   | 1    |
| 227  | N/A           | 2281110491P | CAP CER CC 0.1u/50V (Y5P) P=5.0 K T         | C826     |                   | 1    |
| 228  | N/A           | 2281110491P | CAP CER CC 0.1u/50V (Y5P) P=5.0 K T         | C911     |                   | 1    |
| 229  | N/A           | 2281110491P | CAP CER CC 0.1u/50V (Y5P) P=5.0 K T         | C914     |                   | 1    |
| 230  | N/A           | 2281110491P | CAP CER CC 0.1u/50V (Y5P) P=5.0 K T         | C925     |                   | 1    |
| 231  | N/A           | 2281110491P | CAP CER CC 0.1u/50V (Y5P) P=5.0 K T         | C928     |                   | 1    |
| 232  | N/A           | 2281147191P | CAP CER CC 470pF/50V P=5.0 K T              | C808     |                   | 1    |
| 233  | N/A           | 2284010291P | CAP CER CC 1000p/50V X7R P=5.0 K T          | C917     |                   | 1    |
| 234  | N/A           | 2284010391P | CAP CER CC 0.01u/50V X7R P=5.0 K T          | C910     |                   | 1    |
| 235  | N/A           | 2284010391P | CAP CER CC 0.01u/50V X7R P=5.0 K T          | C912     |                   | 1    |
| 236  | N/A           | 2284010391P | CAP CER CC 0.01u/50V X7R P=5.0 K T          | C913     |                   | 1    |
| 237  | E-00005730    | 2284022291P | CAP CER CC 2200p/50V X7R P=5.0 K T          | C909     |                   | 1    |
| 238  | E-00005730    | 2284022291P | CAP CER CC 2200p/50V X7R P=5.0 K T          | C920     |                   | 1    |
| 239  | E-00005730    | 2284022291P | CAP CER CC 2200p/50V X7R P=5.0 K T          | C923     |                   | 1    |
| 240  | E-00005730    | 2284022291P | CAP CER CC 2200p/50V X7R P=5.0 K T          | C927     |                   | 1    |
| 241  | N/A           | 2284110291P | CAP CER CC 1000P/1KV X7R P=5.0 K T          | C806     |                   | 1    |
| 242  | N/A           | 2284110291P | CAP CER CC 1000P/1KV X7R P=5.0 K T          | C820     |                   | 1    |
| 243  | N/A           | 2284110291P | CAP CER CC 1000P/1KV X7R P=5.0 K T          | C821     |                   | 1    |
| 244  | N/A           | 2287122212P | CAP CER Y1 2200pF/250V P=10.0 M C           | C802 RB  |                   | 1    |
| 245  | N/A           | 2287122212P | CAP CER Y1 2200pF/250V P=10.0 M C           | C803 RB  |                   | 1    |
| 246  | N/A           | 2287122212P | CAP CER Y1 2200pF/250V P=10.0 M C           | C807     |                   | 1    |
| 247  | N/A           | 2287122212P | CAP CER Y1 2200pF/250V P=10.0 M C           | C813     |                   | 1    |

| Item | ViewSonic P/N | Ref. P/N    | Description  | Location | Universal number# | Q'ty |
|------|---------------|-------------|--|----------|-------------------|------|
| 248  | E-C-0404-1856 | 2287210312P | CAP CER Y2 0.01uF/250V P=10.0 M C                          | C831     |                   | 1    |
| 249  | N/A           | 2287222212P | CAP CER Y2 2200p/250V Y5V P=7.5 M K                        | C802 RA  |                   | 1    |
| 250  | N/A           | 2287222212P | CAP CER Y2 2200p/250V Y5V P=7.5 M K                        | C803 RA  |                   | 1    |
| 251  | N/A           | 2300910401P | CAP MTL MINI X2 0.1u/275V P=10.0 K C                       | C804     |                   | 1    |
| 252  | N/A           | 2300947401P | CAP.MTL MINI X2 0.47u/275V P=15.0 M C                      | C801 RA  |                   | 1    |
| 253  | E-00005729    | 2300947481P | X CAP MINI X2 0.47u/275V P=15.0 K C                        | C801 RB  |                   | 1    |
| 254  | E-00003555    | 2302047291P | CAP.MTL MEF 4700pF/50V P=5.0 J T                           | C908     |                   | 1    |
| 255  | E-00003555    | 2302047291P | CAP.MTL MEF 4700pF/50V P=5.0 J T                           | C919     |                   | 1    |
| 256  | N/A           | 2302047391P | CAP.MTL MEF 0.047uF/50V P=5.0 J T                          | C901     |                   | 1    |
| 257  | N/A           | 2302068391P | CAP.MTL MEF 0.068u/50V P=5.0 J T                           | C924     |                   | 1    |
| 258  | N/A           | 2330006491P | CAP ELE SPECIAL (3000HR) EC 470u /16V 10*13 P=5.0 T        | C825     |                   | 1    |
| 259  | E-C-0404-1838 | 2333610691P | CAP ELE 105°C EC 10u/ 50V 5*11 P=5.0 T                     | C827     |                   | 1    |
| 260  | E-C-0404-1833 | 2333622691P | CAP ELE 105°C EC 22u/ 50V 5*11 P=5.0 T                     | C810     |                   | 1    |
| 261  | N/A           | 2335215811P | CAP,ELE LOW ESR 105°C EC 1500u/ 10V10*16 P=5.0 C           | C601     |                   | 1    |
| 262  | N/A           | 2336010811P | HI-LIFE LOW ESR E.CAP (6000HR) EC 1000u/ 16V 10*16 P=5.0 C | C824     |                   | 1    |
| 263  | N/A           | 2336010811P | HI-LIFE LOW ESR E.CAP (6000HR) EC 1000u/ 16V 10*16 P=5.0 C | C830     |                   | 1    |
| 264  | N/A           | 2336047723P | HI-LIFE LOW ESR CAP (6000HR) EC 470u/ 25V 10*13 P=5.0 T    | C906     |                   | 1    |
| 265  | N/A           | 2336047723P | HI-LIFE LOW ESR CAP (6000HR) EC 470u/ 25V 10*13 P=5.0 T    | C907     |                   | 1    |
| 266  | N/A           | 2336047723P | HI-LIFE LOW ESR CAP (6000HR) EC 470u/ 25V 10*13 P=5.0 T    | C921     |                   | 1    |
| 267  | N/A           | 2336047723P | HI-LIFE LOW ESR CAP (6000HR) EC 470u/ 25V 10*13 P=5.0 T    | C922     |                   | 1    |
| 268  | N/A           | 2336047731P | HI-LIFE LOW ESR CAP (6000HR) EC 470u/ 35V 10*21 P=5.0 C    | C822     |                   | 1    |
| 269  | N/A           | 2336047731P | HI-LIFE LOW ESR CAP (6000HR) EC 470u/ 35V 10*21 P=5.0 C    | C823     |                   | 1    |
| 270  | N/A           | 2336047731P | HI-LIFE LOW ESR CAP (6000HR) EC 470u/ 35V 10*21 P=5.0 C    | C829     |                   | 1    |
| 271  | N/A           | 2336047731P | HI-LIFE LOW ESR CAP (6000HR) EC 470u/ 35V 10*21 P=5.0 C    | C904     |                   | 1    |
| 272  | N/A           | 2336047731P | HI-LIFE LOW ESR CAP (6000HR) EC 470u/ 35V 10*21 P=5.0 C    | C926     |                   | 1    |
| 273  | N/A           | 2336310613P | CAP,MINI ELE 105°C EC 10u/ 16V 4*7 P=2.5 T                 | C135     |                   | 1    |
| 274  | N/A           | 2336310613P | CAP,MINI ELE 105°C EC 10u/ 16V 4*7 P=2.5 T                 | C142     |                   | 1    |
| 275  | N/A           | 2336310613P | CAP,MINI ELE 105°C EC 10u/ 16V 4*7 P=2.5 T                 | C106     |                   | 1    |
| 276  | N/A           | 2336310613P | CAP,MINI ELE 105°C EC 10u/ 16V 4*7 P=2.5 T                 | C122     |                   | 1    |
| 277  | N/A           | 2336310613P | CAP,MINI ELE 105°C EC 10u/ 16V 4*7 P=2.5 T                 | C126     |                   | 1    |
| 278  | N/A           | 2336310713P | CAP,MINI ELE 105°C EC 100u/ 16V 6.3*7 P=2.5 T              | C104     |                   | 1    |
| 279  | N/A           | 2336310713P | CAP,MINI ELE 105°C EC 100u/ 16V 6.3*7 P=2.5 T              | C138     |                   | 1    |
| 280  | N/A           | 2336310713P | CAP,MINI ELE 105°C EC 100u/ 16V 6.3*7 P=2.5 T              | C140     |                   | 1    |
| 281  | E-00000999    | 2336347613P | CAP,MINI ELE 105°C EC 47u/ 16V 5*7 P=2.5 T                 | C627     |                   | 1    |
| 282  | E-C-0404-3898 | 2341110096P | CAP,CHIP 125°C CS 0603/COG/50V 10 p J T                    | C144     |                   | 1    |
| 283  | E-C-0404-3898 | 2341110096P | CAP,CHIP 125°C CS 0603/COG/50V 10 p J T                    | C145     |                   | 1    |
| 284  | E-C-0404-4423 | 2341122096P | CAP,CHIP 125°C CS 0603/COG/50V 22p J T                     | C116     |                   | 1    |
| 285  | E-C-0404-4829 | 2341122196P | CAP,CHIP 125°C CS 0603/COG/50V 220p J T                    | C117     |                   | 1    |
| 286  | E-C-0404-4829 | 2341122196P | CAP,CHIP 125°C CS 0603/COG/50V 220p J T                    | C620     |                   | 1    |
| 287  | N/A           | 2346110296P | CAP,CHIP 125°C CS 0603/X7R/50V 1000p K T                   | C112     |                   | 1    |
| 288  | N/A           | 2346110296P | CAP,CHIP 125°C CS 0603/X7R/50V 1000p K T                   | C612     |                   | 1    |
| 289  | N/A           | 2346110296P | CAP,CHIP 125°C CS 0603/X7R/50V 1000p K T                   | C621     |                   | 1    |
| 290  | N/A           | 2346110396P | CAP,CHIP 125°C CS 0603/X7R/50V 0.01u K T                   | C609     |                   | 1    |
| 291  | N/A           | 2346110396P | CAP,CHIP 125°C CS 0603/X7R/50V 0.01u K T                   | C614     |                   | 1    |
| 292  | N/A           | 2346110396P | CAP,CHIP 125°C CS 0603/X7R/50V 0.01u K T                   | C618     |                   | 1    |
| 293  | N/A           | 2346110396P | CAP,CHIP 125°C CS 0603/X7R/50V 0.01u K T                   | C622     |                   | 1    |
| 294  | N/A           | 2346147396P | CAP,CHIP 125°C CS 0603/X7R/50V 0.047u K T                  | C109     |                   | 1    |
| 295  | N/A           | 2346147396P | CAP,CHIP 125°C CS 0603/X7R/50V 0.047u K T                  | C110     |                   | 1    |
| 296  | N/A           | 2346147396P | CAP,CHIP 125°C CS 0603/X7R/50V 0.047u K T                  | C111     |                   | 1    |
| 297  | N/A           | 2346147396P | CAP,CHIP 125°C CS 0603/X7R/50V 0.047u K T                  | C113     |                   | 1    |
| 298  | N/A           | 2346147396P | CAP,CHIP 125°C CS 0603/X7R/50V 0.047u K T                  | C114     |                   | 1    |
| 299  | N/A           | 2346147396P | CAP,CHIP 125°C CS 0603/X7R/50V 0.047u K T                  | C115     |                   | 1    |
| 300  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C101     |                   | 1    |
| 301  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C103     |                   | 1    |
| 302  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C105     |                   | 1    |
| 303  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C107     |                   | 1    |
| 304  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C108     |                   | 1    |
| 305  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C119     |                   | 1    |
| 306  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C120     |                   | 1    |
| 307  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C121     |                   | 1    |
| 308  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C123     |                   | 1    |
| 309  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C125     |                   | 1    |
| 310  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C127     |                   | 1    |
| 311  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C128     |                   | 1    |
| 312  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C129     |                   | 1    |
| 313  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C130     |                   | 1    |
| 314  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C131     |                   | 1    |
| 315  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C132     |                   | 1    |
| 316  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C133     |                   | 1    |
| 317  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C134     |                   | 1    |
| 318  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C136     |                   | 1    |
| 319  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C137     |                   | 1    |
| 320  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C139     |                   | 1    |
| 321  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C141     |                   | 1    |
| 322  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C143     |                   | 1    |
| 323  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C146     |                   | 1    |
| 324  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C147     |                   | 1    |
| 325  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C148     |                   | 1    |
| 326  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C149     |                   | 1    |
| 327  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C150     |                   | 1    |
| 328  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C151     |                   | 1    |
| 329  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C152     |                   | 1    |
| 330  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C153     |                   | 1    |
| 331  | E-C-0404-3815 | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T                     | C154     |                   | 1    |

| Item | ViewSonic P/N  | Ref. P/N    | Description                                       | Location | Universal number# | Q'ty |
|------|----------------|-------------|---|----------|-------------------|------|
| 332  | E-C-0404-3815  | 2346410496P | CAP,CHIP 85°C CS 0603/Y5V/50V 0.1u Z T            | C602     |                   | 1    |
| 333  | N/A            | 2346710596P | CAP,CHIP 85°C CS 0603/Y5V/16V 1.0u Z T            | C603     |                   | 1    |
| 334  | N/A            | 2346710596P | CAP,CHIP 85°C CS 0603/Y5V/16V 1.0u Z T            | C610     |                   | 1    |
| 335  | N/A            | 2346710596P | CAP,CHIP 85°C CS 0603/Y5V/16V 1.0u Z T            | C613     |                   | 1    |
| 336  | N/A            | 2346710596P | CAP,CHIP 85°C CS 0603/Y5V/16V 1.0u Z T            | C615     |                   | 1    |
| 337  | N/A            | 2346710596P | CAP,CHIP 85°C CS 0603/Y5V/16V 1.0u Z T            | C617     |                   | 1    |
| 338  | N/A            | 2347110496P | CAP,CHIP 125°C CS 0805/X7R/50V 0.1u K T           | C611     |                   | 1    |
| 339  | N/A            | 2347110496P | CAP,CHIP 125°C CS 0805/X7R/50V 0.1u K T           | C616     |                   | 1    |
| 340  | N/A            | 2347110496P | CAP,CHIP 125°C CS 0805/X7R/50V 0.1u K T           | C619     |                   | 1    |
| 341  | N/A            | 2347110496P | CAP,CHIP 125°C CS 0805/X7R/50V 0.1u K T           | C624     |                   | 1    |
| 342  | N/A            | 2347110596P | CAP,CHIP 125°C CS 0805/X7R/50V 1.0u K T           | C605 RA  |                   | 1    |
| 343  | N/A            | 2347110596P | CAP,CHIP 125°C CS 0805/X7R/50V 1.0u K T           | C606 RA  |                   | 1    |
| 344  | N/A            | 2347110596P | CAP,CHIP 125°C CS 0805/X7R/50V 1.0u K T           | C608 RA  |                   | 1    |
| 345  | N/A            | 2347110596P | CAP,CHIP 125°C CS 0805/X7R/50V 1.0u K T           | C625 RA  |                   | 1    |
| 346  | N/A            | 2347110596P | CAP,CHIP 125°C CS 0805/X7R/50V 1.0u K T           | C626 RA  |                   | 1    |
| 347  | N/A            | 2347210596P | CAP,CHIP 125°C CS 0805/X7R/25V 1.0u K T           | C605 RB  |                   | 1    |
| 348  | N/A            | 2347210596P | CAP,CHIP 125°C CS 0805/X7R/25V 1.0u K T           | C606 RB  |                   | 1    |
| 349  | N/A            | 2347210596P | CAP,CHIP 125°C CS 0805/X7R/25V 1.0u K T           | C608 RB  |                   | 1    |
| 350  | N/A            | 2347210596P | CAP,CHIP 125°C CS 0805/X7R/25V 1.0u K T           | C625 RB  |                   | 1    |
| 351  | N/A            | 2347210596P | CAP,CHIP 125°C CS 0805/X7R/25V 1.0u K T           | C626 RB  |                   | 1    |
| 352  | N/A            | 2357512718P | EC HI-RIPPLE 105C 400V EC 120u/400V 18*36 P=7.5 S | C805     |                   | 1    |
| 353  | E-Q-0402-1607  | 2360100596P | XISTOR,PNP R SMD MMBT3906-NL SOT23 FAIRCHILD      | Q105 RD  |                   | 1    |
| 354  | E-Q-0402-1607  | 2360100596P | XISTOR,PNP R SMD MMBT3906-NL SOT23 FAIRCHILD      | Q106 RD  |                   | 1    |
| 355  | E-Q-0402-1607  | 2360100596P | XISTOR,PNP R SMD MMBT3906-NL SOT23 FAIRCHILD      | Q107 RD  |                   | 1    |
| 356  | E-Q-0402-1607  | 2360100596P | XISTOR,PNP R SMD MMBT3906-NL SOT23 FAIRCHILD      | Q108 RD  |                   | 1    |
| 357  | N/A            | 2360100696P | XISTOR,PNP R SMD PMBS3906 SOT-23 PHILIPS          | Q105 RB  |                   | 1    |
| 358  | N/A            | 2360100696P | XISTOR,PNP R SMD PMBS3906 SOT-23 PHILIPS          | Q106 RB  |                   | 1    |
| 359  | N/A            | 2360100696P | XISTOR,PNP R SMD PMBS3906 SOT-23 PHILIPS          | Q107 RB  |                   | 1    |
| 360  | N/A            | 2360100696P | XISTOR,PNP R SMD PMBS3906 SOT-23 PHILIPS          | Q108 RB  |                   | 1    |
| 361  | E-Q-0402-1607  | 2360100796P | XISTOR,PNP R SMD MMBT3906-F SOT-23 DIODES         | Q105 RC  |                   | 1    |
| 362  | E-Q-0402-1607  | 2360100796P | XISTOR,PNP R SMD MMBT3906-F SOT-23 DIODES         | Q106 RC  |                   | 1    |
| 363  | E-Q-0402-1607  | 2360100796P | XISTOR,PNP R SMD MMBT3906-F SOT-23 DIODES         | Q107 RC  |                   | 1    |
| 364  | E-Q-0402-1607  | 2360100796P | XISTOR,PNP R SMD MMBT3906-F SOT-23 DIODES         | Q108 RC  |                   | 1    |
| 365  | N/A            | 2360100896P | XISTOR,PNP R SMD MMBT3906LT1G SOT-23 ON           | Q105 RA  |                   | 1    |
| 366  | N/A            | 2360100896P | XISTOR,PNP R SMD MMBT3906LT1G SOT-23 ON           | Q106 RA  |                   | 1    |
| 367  | N/A            | 2360100896P | XISTOR,PNP R SMD MMBT3906LT1G SOT-23 ON           | Q107 RA  |                   | 1    |
| 368  | N/A            | 2360100896P | XISTOR,PNP R SMD MMBT3906LT1G SOT-23 ON           | Q108 RA  |                   | 1    |
| 369  | E-Q-0402-1608  | 2360300896P | XISTOR,NPN R SMD MMBT3904K SOT-23 FAIRCHILD       | Q104 RB  |                   | 1    |
| 370  | E-Q-0402-1608  | 2360300896P | XISTOR,NPN R SMD MMBT3904K SOT-23 FAIRCHILD       | Q109 RB  |                   | 1    |
| 371  | E-Q-0402-1608  | 2360300896P | XISTOR,NPN R SMD MMBT3904K SOT-23 FAIRCHILD       | Q602 RB  |                   | 1    |
| 372  | E-Q-0402-1180  | 2360301296P | XISTOR,NPN R SMD MMBT3904-F SOT23 DIODES          | Q104 RA  |                   | 1    |
| 373  | E-Q-0402-1180  | 2360301296P | XISTOR,NPN R SMD MMBT3904-F SOT23 DIODES          | Q109 RA  |                   | 1    |
| 374  | E-Q-0402-1180  | 2360301296P | XISTOR,NPN R SMD MMBT3904-F SOT23 DIODES          | Q602 RA  |                   | 1    |
| 375  | E-Q-0402-1624  | 2360301696P | XISTOR,NPN R SMD PMBS3904 SOT-23 PHILIPS          | Q104 RC  |                   | 1    |
| 376  | E-Q-0402-1624  | 2360301696P | XISTOR,NPN R SMD PMBS3904 SOT-23 PHILIPS          | Q109 RC  |                   | 1    |
| 377  | E-Q-0402-1624  | 2360301696P | XISTOR,NPN R SMD PMBS3904 SOT-23 PHILIPS          | Q602 RC  |                   | 1    |
| 378  | N/A            | 2360501396P | FET,P-CH SMD AP2305GN SOT23 APEC                  | Q103 RA  |                   | 1    |
| 379  | N/A            | 2360502096P | FET,P-CH SMD AP4953M SO-8 Analog Power            | Q906 RB  |                   | 1    |
| 380  | N/A            | 2360502096P | FET,P-CH SMD AP4953M SO-8 Analog Power            | Q912 RB  |                   | 1    |
| 381  | N/A            | 2360502196P | FET,P-CH SMD STS2301 SOT-23 SamHop                | Q103 RB  |                   | 1    |
| 382  | N/A            | 2360502296P | FET,P-CH SMD AP4593M SO-8 APEC                    | Q906 RA  |                   | 1    |
| 383  | N/A            | 2360502296P | FET,P-CH SMD AP4593M SO-8 APEC                    | Q912 RA  |                   | 1    |
| 384  | N/A            | 2360502496P | FET,P-CH SMD APM4953KCTRL SO-8 ANPEC              | Q906 RC  |                   | 1    |
| 385  | N/A            | 2360502496P | FET,P-CH SMD APM4953KCTRL SO-8 ANPEC              | Q912 RC  |                   | 1    |
| 386  | N/A            | 2360609896P | FET,N-CH(SMD) STM6920                             | Q905 RB  |                   | 1    |
| 387  | N/A            | 2360609896P | FET,N-CH(SMD) STM6920                             | Q911 RB  |                   | 1    |
| 388  | N/A            | 2360610096P | FET,N-CH(SMD) P2804HVG SOP-8 NIKO-SEM             | Q905 RA  |                   | 1    |
| 389  | N/A            | 2360610096P | FET,N-CH(SMD) P2804HVG SOP-8 NIKO-SEM             | Q911 RA  |                   | 1    |
| 390  | E-Q-0402-1106  | 2361100491P | XISTOR,PNP R 2SA733-AP-TP TO-92 NEC               | Q913 RC  |                   | 1    |
| 391  | E-Q-0402-0962  | 2361110791P | XISTOR,PNP R KSA733-G TO-92 FAIRCHILD             | Q913 RB  |                   | 1    |
| 392  | E-Q-0402-0720  | 2361111491P | XISTOR,PNP R 2PA733P TO-92 PHILIPS                | Q913 RA  |                   | 1    |
| 393  | E-Q-0402-0428  | 2361302591P | XISTOR,NPN R 2SC945-AP TO-92 NEC                  | Q901 RC  |                   | 1    |
| 394  | E-Q-0402-0428  | 2361302591P | XISTOR,NPN R 2SC945-AP TO-92 NEC                  | Q907 RC  |                   | 1    |
| 395  | E-Q-0402-0428  | 2361302591P | XISTOR,NPN R 2SC945-AP TO-92 NEC                  | Q908 RC  |                   | 1    |
| 396  | E-Q-0402-0428  | 2361302591P | XISTOR,NPN R 2SC945-AP TO-92 NEC                  | Q910 RC  |                   | 1    |
| 397  | E-Q-0402-0428  | 2361302591P | XISTOR,NPN R 2SC945-AP TO-92 NEC                  | Q802 RC  |                   | 1    |
| 398  | E-Q-0402-0555  | 2361313691P | XISTOR,NPN R KSC945CGTA TO-92 FAIRCHILD           | Q901 RB  |                   | 1    |
| 399  | E-Q-0402-0555  | 2361313691P | XISTOR,NPN R KSC945CGTA TO-92 FAIRCHILD           | Q907 RB  |                   | 1    |
| 400  | E-Q-0402-0555  | 2361313691P | XISTOR,NPN R KSC945CGTA TO-92 FAIRCHILD           | Q908 RB  |                   | 1    |
| 401  | E-Q-0402-0555  | 2361313691P | XISTOR,NPN R KSC945CGTA TO-92 FAIRCHILD           | Q910 RB  |                   | 1    |
| 402  | E-Q-0402-0555  | 2361313691P | XISTOR,NPN R KSC945CGTA TO-92 FAIRCHILD           | Q802 RB  |                   | 1    |
| 403  | E-Q-0402-0718  | 2361316191P | XISTOR,NPN R 2PC945P TO-92 PHILIPS                | Q901 RA  |                   | 1    |
| 404  | E-Q-0402-0718  | 2361316191P | XISTOR,NPN R 2PC945P TO-92 PHILIPS                | Q907 RA  |                   | 1    |
| 405  | E-Q-0402-0718  | 2361316191P | XISTOR,NPN R 2PC945P TO-92 PHILIPS                | Q908 RA  |                   | 1    |
| 406  | E-Q-0402-0718  | 2361316191P | XISTOR,NPN R 2PC945P TO-92 PHILIPS                | Q910 RA  |                   | 1    |
| 407  | E-Q-0402-0718  | 2361316191P | XISTOR,NPN R 2PC945P TO-92 PHILIPS                | Q802 RA  |                   | 1    |
| 408  | N/A            | 2361609891P | FET,N-CH 2N7000TA TO-92 FAIRCHILD                 | Q909 RA  |                   | 1    |
| 409  | N/A            | 2361609891P | FET,N-CH 2N7000TA TO-92 FAIRCHILD                 | Q915 RA  |                   | 1    |
| 410  | N/A            | 2361610200P | FET,N-CH 2SK2645-54MR FUJI                        | Q801 RC  |                   | 1    |
| 411  | N/A            | 2361612091P | FET,N-CH MW2N7000 TO-92 MAXWELLS                  | Q909 RB  |                   | 1    |
| 412  | N/A            | 2361612091P | FET,N-CH MW2N7000 TO-92 MAXWELLS                  | Q915 RB  |                   | 1    |
| 413  | N/A            | 2361612200P | FET,N-CH AP2761GI-A TO-220CFM APEC                | Q801 RB  |                   | 1    |
| 414  | N/A            | 2361612300P | FET,N-CH FQPF7N65C TO-220F FAIRCHILD              | Q801 RA  |                   | 1    |
| 415  | E-PC-0411-0083 | 2362401800P | PHOTO COUPLR TLP621 TOSHIBA                       | I802 RA  |                   | 1    |



| Item | ViewSonic P/N | Ref. P/N    | Description                                | Location | Universal number# | Q'ty |
|------|---------------|-------------|--|----------|-------------------|------|
| 416  | N/A           | 2362402200P | PHOTO COUPLR K1010-3B (H4) COSMO           | I802 RC  |                   | 1    |
| 417  | E-00005306    | 2362402300P | PHOTO COUPLR TLP421 DIP4 TOSHIBA           | I802 RB  |                   | 1    |
| 418  | E-D-0403-1465 | 2363220395P | DIODE,RECT UF4004G DO-41 PEC               | D807 RA  |                   | 1    |
| 419  | N/A           | 2363231995P | DIODE,RECT UF4007 DO-41 1000V/1A PEC       | D806 RA  |                   | 1    |
| 420  | N/A           | 2363234995P | DIODE,RECT UF4007 DO-41 MOSPEC             | D806 RB  |                   | 1    |
| 421  | N/A           | 2363235195P | DIODE,RECT UPG10G DO-204AL ZOWIE           | D807 RB  |                   | 1    |
| 422  | N/A           | 2363235695P | DIODE,RECT UF1004 DO-41 DIODES             | D807 RC  |                   | 1    |
| 423  | N/A           | 2363235795P | DIODE,RECT UF1007 DO-41 DIODES             | D806 RC  |                   | 1    |
| 424  | N/A           | 2363304100P | DIODE,SCHOTTKY SB1060FCT TO-220AB PEC      | D822 RB  |                   | 1    |
| 425  | N/A           | 2363304200P | DIODE,SCHOTTKY GMR10H60C TO-220FPAB GAMMA  | D822 RA  |                   | 1    |
| 426  | N/A           | 2363304600P | DIODE,SCHOTTKY FCQ10U06 TO-220AB NI        | D822 RC  |                   | 1    |
| 427  | N/A           | 2363304800P | DIODE,SCHOTTKY GMR10H200C TO-220FPAB GAMMA | D821 RB  |                   | 1    |
| 428  | N/A           | 2363304900P | DIODE,SCHOTTKY SRF10200C ITO-220 MOSPEC    | D821 RA  |                   | 1    |
| 429  | N/A           | 2363305100P | DIODE,SCHOTTKY FCH10A20 TO-220AB NI        | D821 RD  |                   | 1    |
| 430  | N/A           | 2363305200P | DIODE,SCHOTTKY SP10200 ITO-220 SECOS       | D821 RC  |                   | 1    |
| 431  | N/A           | 2363515395P | DIODE,ZENER HZ27-2 26.2V-27.6V HITACHI     | Z801 RA  |                   | 1    |
| 432  | N/A           | 2363515395P | DIODE,ZENER HZ27-2 26.2V-27.6V HITACHI     | Z802 RA  |                   | 1    |
| 433  | N/A           | 2363527015P | DIODE,ZENER 1N5254B 25.65-28.35V DO-35 PEC | Z801 RB  |                   | 1    |
| 434  | N/A           | 2363527015P | DIODE,ZENER 1N5254B 25.65-28.35V DO-35 PEC | Z802 RB  |                   | 1    |
| 435  | E-D-0403-0531 | 2363600195P | DIODE,SWITCH 1N4148 DO-35 WILLAS           | D902 RC  |                   | 1    |
| 436  | E-D-0403-0531 | 2363600195P | DIODE,SWITCH 1N4148 DO-35 WILLAS           | D905 RC  |                   | 1    |
| 437  | E-D-0403-0531 | 2363600195P | DIODE,SWITCH 1N4148 DO-35 WILLAS           | D906 RC  |                   | 1    |
| 438  | E-D-0403-0531 | 2363600195P | DIODE,SWITCH 1N4148 DO-35 WILLAS           | D907 RC  |                   | 1    |
| 439  | E-D-0403-0531 | 2363600195P | DIODE,SWITCH 1N4148 DO-35 WILLAS           | D908 RC  |                   | 1    |
| 440  | E-D-0403-0531 | 2363600195P | DIODE,SWITCH 1N4148 DO-35 WILLAS           | D909 RC  |                   | 1    |
| 441  | E-D-0403-0531 | 2363600195P | DIODE,SWITCH 1N4148 DO-35 WILLAS           | D910 RC  |                   | 1    |
| 442  | E-D-0403-0531 | 2363600195P | DIODE,SWITCH 1N4148 DO-35 WILLAS           | D911 RC  |                   | 1    |
| 443  | E-D-0403-0531 | 2363600195P | DIODE,SWITCH 1N4148 DO-35 WILLAS           | D912 RC  |                   | 1    |
| 444  | E-D-0403-0531 | 2363600195P | DIODE,SWITCH 1N4148 DO-35 WILLAS           | D913 RC  |                   | 1    |
| 445  | E-D-0403-0531 | 2363600195P | DIODE,SWITCH 1N4148 DO-35 WILLAS           | D915 RC  |                   | 1    |
| 446  | E-D-0403-0531 | 2363600195P | DIODE,SWITCH 1N4148 DO-35 WILLAS           | D916 RC  |                   | 1    |
| 447  | E-D-0403-0531 | 2363600195P | DIODE,SWITCH 1N4148 DO-35 WILLAS           | D917 RC  |                   | 1    |
| 448  | E-D-0403-0531 | 2363600195P | DIODE,SWITCH 1N4148 DO-35 WILLAS           | D918 RC  |                   | 1    |
| 449  | E-00003534    | 2363600696P | DIODE,SWITCH RLS4148-T11 SOD80C ROHM       | D103 RB  |                   | 1    |
| 450  | E-00003534    | 2363600696P | DIODE,SWITCH RLS4148-T11 SOD80C ROHM       | D104 RB  |                   | 1    |
| 451  | E-00003534    | 2363600696P | DIODE,SWITCH RLS4148-T11 SOD80C ROHM       | D105 RB  |                   | 1    |
| 452  | E-00003534    | 2363600696P | DIODE,SWITCH RLS4148-T11 SOD80C ROHM       | D106 RB  |                   | 1    |
| 453  | E-00003534    | 2363600696P | DIODE,SWITCH RLS4148-T11 SOD80C ROHM       | D107 RB  |                   | 1    |
| 454  | E-00003534    | 2363600696P | DIODE,SWITCH RLS4148-T11 SOD80C ROHM       | D108 RB  |                   | 1    |
| 455  | E-00003534    | 2363600696P | DIODE,SWITCH RLS4148-T11 SOD80C ROHM       | D124 RB  |                   | 1    |
| 456  | E-00003534    | 2363600696P | DIODE,SWITCH RLS4148-T11 SOD80C ROHM       | D125 RB  |                   | 1    |
| 457  | E-00003534    | 2363600696P | DIODE,SWITCH RLS4148-T11 SOD80C ROHM       | D126 RB  |                   | 1    |
| 458  | E-00003534    | 2363600696P | DIODE,SWITCH RLS4148-T11 SOD80C ROHM       | D127 RB  |                   | 1    |
| 459  | E-00003534    | 2363600696P | DIODE,SWITCH RLS4148-T11 SOD80C ROHM       | D128 RB  |                   | 1    |
| 460  | N/A           | 2363601095P | DIODE,SWITCH 1N4148 DO-35 PHILIPS          | D902 RA  |                   | 1    |
| 461  | N/A           | 2363601095P | DIODE,SWITCH 1N4148 DO-35 PHILIPS          | D905 RA  |                   | 1    |
| 462  | N/A           | 2363601095P | DIODE,SWITCH 1N4148 DO-35 PHILIPS          | D906 RA  |                   | 1    |
| 463  | N/A           | 2363601095P | DIODE,SWITCH 1N4148 DO-35 PHILIPS          | D907 RA  |                   | 1    |
| 464  | N/A           | 2363601095P | DIODE,SWITCH 1N4148 DO-35 PHILIPS          | D908 RA  |                   | 1    |
| 465  | N/A           | 2363601095P | DIODE,SWITCH 1N4148 DO-35 PHILIPS          | D909 RA  |                   | 1    |
| 466  | N/A           | 2363601095P | DIODE,SWITCH 1N4148 DO-35 PHILIPS          | D910 RA  |                   | 1    |
| 467  | N/A           | 2363601095P | DIODE,SWITCH 1N4148 DO-35 PHILIPS          | D911 RA  |                   | 1    |
| 468  | N/A           | 2363601095P | DIODE,SWITCH 1N4148 DO-35 PHILIPS          | D912 RA  |                   | 1    |
| 469  | N/A           | 2363601095P | DIODE,SWITCH 1N4148 DO-35 PHILIPS          | D913 RA  |                   | 1    |
| 470  | N/A           | 2363601095P | DIODE,SWITCH 1N4148 DO-35 PHILIPS          | D915 RA  |                   | 1    |
| 471  | N/A           | 2363601095P | DIODE,SWITCH 1N4148 DO-35 PHILIPS          | D916 RA  |                   | 1    |
| 472  | N/A           | 2363601095P | DIODE,SWITCH 1N4148 DO-35 PHILIPS          | D917 RA  |                   | 1    |
| 473  | N/A           | 2363601095P | DIODE,SWITCH 1N4148 DO-35 PHILIPS          | D918 RA  |                   | 1    |
| 474  | N/A           | 2363601795P | DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD   | D902 RB  |                   | 1    |
| 475  | N/A           | 2363601795P | DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD   | D905 RB  |                   | 1    |
| 476  | N/A           | 2363601795P | DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD   | D906 RB  |                   | 1    |
| 477  | N/A           | 2363601795P | DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD   | D907 RB  |                   | 1    |
| 478  | N/A           | 2363601795P | DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD   | D908 RB  |                   | 1    |
| 479  | N/A           | 2363601795P | DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD   | D909 RB  |                   | 1    |
| 480  | N/A           | 2363601795P | DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD   | D910 RB  |                   | 1    |
| 481  | N/A           | 2363601795P | DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD   | D911 RB  |                   | 1    |
| 482  | N/A           | 2363601795P | DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD   | D912 RB  |                   | 1    |
| 483  | N/A           | 2363601795P | DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD   | D913 RB  |                   | 1    |
| 484  | N/A           | 2363601795P | DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD   | D915 RB  |                   | 1    |
| 485  | N/A           | 2363601795P | DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD   | D916 RB  |                   | 1    |
| 486  | N/A           | 2363601795P | DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD   | D917 RB  |                   | 1    |
| 487  | N/A           | 2363601795P | DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD   | D918 RB  |                   | 1    |
| 488  | N/A           | 2363705896P | LED SIA3227Y2B1CB YEL/BLU BRIGHTTEK        | D701     |                   | 1    |
| 489  | E-D-0403-1892 | 2364200896P | DIODE,RECT(SMD) BAS32L SOD80C PHILIPS      | D103 RC  |                   | 1    |
| 490  | E-D-0403-1892 | 2364200896P | DIODE,RECT(SMD) BAS32L SOD80C PHILIPS      | D104 RC  |                   | 1    |
| 491  | E-D-0403-1892 | 2364200896P | DIODE,RECT(SMD) BAS32L SOD80C PHILIPS      | D105 RC  |                   | 1    |
| 492  | E-D-0403-1892 | 2364200896P | DIODE,RECT(SMD) BAS32L SOD80C PHILIPS      | D106 RC  |                   | 1    |
| 493  | E-D-0403-1892 | 2364200896P | DIODE,RECT(SMD) BAS32L SOD80C PHILIPS      | D107 RC  |                   | 1    |
| 494  | E-D-0403-1892 | 2364200896P | DIODE,RECT(SMD) BAS32L SOD80C PHILIPS      | D108 RC  |                   | 1    |
| 495  | E-D-0403-1892 | 2364200896P | DIODE,RECT(SMD) BAS32L SOD80C PHILIPS      | D124 RC  |                   | 1    |
| 496  | E-D-0403-1892 | 2364200896P | DIODE,RECT(SMD) BAS32L SOD80C PHILIPS      | D125 RC  |                   | 1    |
| 497  | E-D-0403-1892 | 2364200896P | DIODE,RECT(SMD) BAS32L SOD80C PHILIPS      | D126 RC  |                   | 1    |
| 498  | E-D-0403-1892 | 2364200896P | DIODE,RECT(SMD) BAS32L SOD80C PHILIPS      | D127 RC  |                   | 1    |
| 499  | E-D-0403-1892 | 2364200896P | DIODE,RECT(SMD) BAS32L SOD80C PHILIPS      | D128 RC  |                   | 1    |

| Item | ViewSonic P/N  | Ref. P/N    | Description                                     | Location | Universal number# | Q'ty |
|------|----------------|-------------|---|----------|-------------------|------|
| 500  | N/A            | 2364500396P | DIODE,ZENER SMD RLZ5.6B 5.45-5.73V LL-34 ROHM   | D101 RC  |                   | 1    |
| 501  | N/A            | 2364500396P | DIODE,ZENER SMD RLZ5.6B 5.45-5.73V LL-34 ROHM   | D102 RC  |                   | 1    |
| 502  | N/A            | 2364500396P | DIODE,ZENER SMD RLZ5.6B 5.45-5.73V LL-34 ROHM   | D109 RC  |                   | 1    |
| 503  | N/A            | 2364500396P | DIODE,ZENER SMD RLZ5.6B 5.45-5.73V LL-34 ROHM   | D110 RC  |                   | 1    |
| 504  | N/A            | 2364500396P | DIODE,ZENER SMD RLZ5.6B 5.45-5.73V LL-34 ROHM   | D111 RC  |                   | 1    |
| 505  | N/A            | 2364500396P | DIODE,ZENER SMD RLZ5.6B 5.45-5.73V LL-34 ROHM   | D113 RC  |                   | 1    |
| 506  | N/A            | 2364500396P | DIODE,ZENER SMD RLZ5.6B 5.45-5.73V LL-34 ROHM   | D122 RC  |                   | 1    |
| 507  | N/A            | 2364500396P | DIODE,ZENER SMD RLZ5.6B 5.45-5.73V LL-34 ROHM   | D123 RC  |                   | 1    |
| 508  | N/A            | 2364500396P | DIODE,ZENER SMD RLZ5.6B 5.45-5.73V LL-34 ROHM   | D129 RC  |                   | 1    |
| 509  | E-D-0403-1779  | 2364503996P | DIODE,ZENER SMD BZV55-C5V6 5% SOD-80C PHILIPS   | D101 RA  |                   | 1    |
| 510  | E-D-0403-1779  | 2364503996P | DIODE,ZENER SMD BZV55-C5V6 5% SOD-80C PHILIPS   | D102 RA  |                   | 1    |
| 511  | E-D-0403-1779  | 2364503996P | DIODE,ZENER SMD BZV55-C5V6 5% SOD-80C PHILIPS   | D109 RA  |                   | 1    |
| 512  | E-D-0403-1779  | 2364503996P | DIODE,ZENER SMD BZV55-C5V6 5% SOD-80C PHILIPS   | D110 RA  |                   | 1    |
| 513  | E-D-0403-1779  | 2364503996P | DIODE,ZENER SMD BZV55-C5V6 5% SOD-80C PHILIPS   | D111 RA  |                   | 1    |
| 514  | E-D-0403-1779  | 2364503996P | DIODE,ZENER SMD BZV55-C5V6 5% SOD-80C PHILIPS   | D113 RA  |                   | 1    |
| 515  | E-D-0403-1779  | 2364503996P | DIODE,ZENER SMD BZV55-C5V6 5% SOD-80C PHILIPS   | D122 RA  |                   | 1    |
| 516  | E-D-0403-1779  | 2364503996P | DIODE,ZENER SMD BZV55-C5V6 5% SOD-80C PHILIPS   | D123 RA  |                   | 1    |
| 517  | E-D-0403-1779  | 2364503996P | DIODE,ZENER SMD BZV55-C5V6 5% SOD-80C PHILIPS   | D129 RA  |                   | 1    |
| 518  | E-D-0403-2808  | 2364505616P | DIODE,ZENER SMD TZMC5V6 SOD-80 5.2-6.0V VISHAY  | D101 RB  |                   | 1    |
| 519  | E-D-0403-2808  | 2364505616P | DIODE,ZENER SMD TZMC5V6 SOD-80 5.2-6.0V VISHAY  | D102 RB  |                   | 1    |
| 520  | E-D-0403-2808  | 2364505616P | DIODE,ZENER SMD TZMC5V6 SOD-80 5.2-6.0V VISHAY  | D109 RB  |                   | 1    |
| 521  | E-D-0403-2808  | 2364505616P | DIODE,ZENER SMD TZMC5V6 SOD-80 5.2-6.0V VISHAY  | D110 RB  |                   | 1    |
| 522  | E-D-0403-2808  | 2364505616P | DIODE,ZENER SMD TZMC5V6 SOD-80 5.2-6.0V VISHAY  | D111 RB  |                   | 1    |
| 523  | E-D-0403-2808  | 2364505616P | DIODE,ZENER SMD TZMC5V6 SOD-80 5.2-6.0V VISHAY  | D113 RB  |                   | 1    |
| 524  | E-D-0403-2808  | 2364505616P | DIODE,ZENER SMD TZMC5V6 SOD-80 5.2-6.0V VISHAY  | D122 RB  |                   | 1    |
| 525  | E-D-0403-2808  | 2364505616P | DIODE,ZENER SMD TZMC5V6 SOD-80 5.2-6.0V VISHAY  | D123 RB  |                   | 1    |
| 526  | E-D-0403-2808  | 2364505616P | DIODE,ZENER SMD TZMC5V6 SOD-80 5.2-6.0V VISHAY  | D129 RB  |                   | 1    |
| 527  | N/A            | 2364530016P | DIODE,ZENER SMD MMSZ5256B SOD-123 PEC           | Z803     |                   | 1    |
| 528  | N/A            | 2364600496P | DIODE,SWITCH SMD MM4148 SOD80C GRANDE           | D103 RA  |                   | 1    |
| 529  | N/A            | 2364600496P | DIODE,SWITCH SMD MM4148 SOD80C GRANDE           | D104 RA  |                   | 1    |
| 530  | N/A            | 2364600496P | DIODE,SWITCH SMD MM4148 SOD80C GRANDE           | D105 RA  |                   | 1    |
| 531  | N/A            | 2364600496P | DIODE,SWITCH SMD MM4148 SOD80C GRANDE           | D106 RA  |                   | 1    |
| 532  | N/A            | 2364600496P | DIODE,SWITCH SMD MM4148 SOD80C GRANDE           | D107 RA  |                   | 1    |
| 533  | N/A            | 2364600496P | DIODE,SWITCH SMD MM4148 SOD80C GRANDE           | D108 RA  |                   | 1    |
| 534  | N/A            | 2364600496P | DIODE,SWITCH SMD MM4148 SOD80C GRANDE           | D124 RA  |                   | 1    |
| 535  | N/A            | 2364600496P | DIODE,SWITCH SMD MM4148 SOD80C GRANDE           | D125 RA  |                   | 1    |
| 536  | N/A            | 2364600496P | DIODE,SWITCH SMD MM4148 SOD80C GRANDE           | D126 RA  |                   | 1    |
| 537  | N/A            | 2364600496P | DIODE,SWITCH SMD MM4148 SOD80C GRANDE           | D127 RA  |                   | 1    |
| 538  | N/A            | 2364600496P | DIODE,SWITCH SMD MM4148 SOD80C GRANDE           | D128 RA  |                   | 1    |
| 539  | E-00003830     | 2364601396P | DIODE,SWITCH SMD 1N4148W-7-F SOD-123 DIODES     | D103 RD  |                   | 1    |
| 540  | E-00003830     | 2364601396P | DIODE,SWITCH SMD 1N4148W-7-F SOD-123 DIODES     | D104 RD  |                   | 1    |
| 541  | E-00003830     | 2364601396P | DIODE,SWITCH SMD 1N4148W-7-F SOD-123 DIODES     | D105 RD  |                   | 1    |
| 542  | E-00003830     | 2364601396P | DIODE,SWITCH SMD 1N4148W-7-F SOD-123 DIODES     | D106 RD  |                   | 1    |
| 543  | E-00003830     | 2364601396P | DIODE,SWITCH SMD 1N4148W-7-F SOD-123 DIODES     | D107 RD  |                   | 1    |
| 544  | E-00003830     | 2364601396P | DIODE,SWITCH SMD 1N4148W-7-F SOD-123 DIODES     | D108 RD  |                   | 1    |
| 545  | E-00003830     | 2364601396P | DIODE,SWITCH SMD 1N4148W-7-F SOD-123 DIODES     | D124 RD  |                   | 1    |
| 546  | E-00003830     | 2364601396P | DIODE,SWITCH SMD 1N4148W-7-F SOD-123 DIODES     | D125 RD  |                   | 1    |
| 547  | E-00003830     | 2364601396P | DIODE,SWITCH SMD 1N4148W-7-F SOD-123 DIODES     | D126 RD  |                   | 1    |
| 548  | E-00003830     | 2364601396P | DIODE,SWITCH SMD 1N4148W-7-F SOD-123 DIODES     | D127 RD  |                   | 1    |
| 549  | E-00003830     | 2364601396P | DIODE,SWITCH SMD 1N4148W-7-F SOD-123 DIODES     | D128 RD  |                   | 1    |
| 550  | N/A            | 2365100996P | MEMORY IC AT24C16AN-10SU-2.7 SO-8 AMTEL         | I105 RB  |                   | 1    |
| 551  | N/A            | 2365106396P | MEMORY IC (EEPROM) M24C16-WMN6TP SO-8 ST        | I105 RC  |                   | 1    |
| 552  | E-IC-0401-1270 | 2365319391P | LINEAR IC TL431CLPRE3 TO-92 TI                  | I803 RB  |                   | 1    |
| 553  | E-IC-0401-2152 | 2365321991P | LINEAR IC KA431AZTA TO-92 FAIRCHILD             | I803 RC  |                   | 1    |
| 554  | N/A            | 2365327691P | LINEAR IC CM431GDCN TO-92 CHAMPION              | I803 RD  |                   | 1    |
| 555  | N/A            | 2365328191P | LINEAR IC AP431VLA TO-92 ATC                    | I803 RA  |                   | 1    |
| 556  | N/A            | 2365335076P | LINEAR IC CM1117GDCM223 SOT223 CHAMPION         | I102 RC  |                   | 1    |
| 557  | N/A            | 2365335086P | LINEAR IC AIC1117A-18PY SOT223 AIC              | I102 RB  |                   | 1    |
| 558  | N/A            | 2365335236P | LINEAR IC OZ9936GN SOIC-8 O2-MICRO              | I901     |                   | 1    |
| 559  | N/A            | 2365335266P | LINEAR IC LD7575PS SOP-8 Leadtrend              | I801     |                   | 1    |
| 560  | N/A            | 2365335436P | LINEAR IC TPA2008D2PWP HTSSOP-24 TI             | I601     |                   | 1    |
| 561  | N/A            | 2365425716P | DIGITAL IC RTD2553V-LF PQFP-128 REALTEK         | I104     |                   | 1    |
| 562  | N/A            | 2365425726P | DIGITAL IC RTD2120L-LF LQFP-48 REALTEK          | I106     |                   | 1    |
| 563  | N/A            | 2365807196P | IC,LINEAR(SMD) AMC1117-3.3 SOT-223 ADD          | I101 RA  |                   | 1    |
| 564  | E-IC-0401-2924 | 2365808196P | IC,LINEAR(SMD) AP1117E33LA SOT-223 AnaChip      | I101 RC  |                   | 1    |
| 565  | N/A            | 2365808396P | IC,LINEAR(SMD) AIC1117-33PY SOT-223 AIC         | I101 RD  |                   | 1    |
| 566  | N/A            | 2365809496P | IC,LINEAR(SMD) CM1117SCM-3.3V SOT223 CHAMPION   | I101 RB  |                   | 1    |
| 567  | N/A            | 2365813696P | IC,LINEAR(SMD) AP1117E18LA SOT-223 AnaChip      | I102 RA  |                   | 1    |
| 568  | N/A            | 2365915896P | IC,DIGITAL SMD 24LC16BT/SN SO-8 MICROCHIP       | I105 RA  |                   | 1    |
| 569  | N/A            | 2368502400P | RECT,BRIDGE GBU4K 4A/800V PEC                   | D801 RB  |                   | 1    |
| 570  | N/A            | 2368502900P | RECT,BRIDGE GBU4K 4A/800V MOSPEC                | D801 RA  |                   | 1    |
| 571  | N/A            | 2369105701P | XTAL,OSC 24.0000MHZ/49US 0.1mw/16PF             | X101     |                   | 1    |
| 572  | N/A            | 2371115001P | COIL,CHOKE 15uH/ 8*10 UEW 0.5mm/21.5Ts          | L603     |                   | 1    |
| 573  | N/A            | 2371115001P | COIL,CHOKE 15uH/ 8*10 UEW 0.5mm/21.5Ts          | L604     |                   | 1    |
| 574  | N/A            | 2371115001P | COIL,CHOKE 15uH/ 8*10 UEW 0.5mm/21.5Ts          | L605     |                   | 1    |
| 575  | N/A            | 2371115001P | COIL,CHOKE 15uH/ 8*10 UEW 0.5mm/21.5Ts          | L606     |                   | 1    |
| 576  | N/A            | 2371150903P | COIL,CHOKE 5uH 7.8*10 UEW 0.65mm/12.5Ts         | L804     |                   | 1    |
| 577  | N/A            | 2371152302P | COIL,CHOKE ET-24 52mH 0.35mm/60+60Ts*2          | L805     |                   | 1    |
| 578  | N/A            | 2374233031P | XFORMER,POWR DS3319 0.4mm*/1/23+23Ts LSE        | T801 RB  |                   | 1    |
| 579  | N/A            | 2374233032P | XFORMER,POWR DS3319 0.4mm*/1/23+23Ts LI TAI     | T801 RA  |                   | 1    |
| 580  | N/A            | 2374301604P | XFORMER INVERTER TLT-1503 15/2000Ts 0.1*20/0.06 | T901 RB  |                   | 1    |
| 581  | N/A            | 2374301604P | XFORMER INVERTER TLT-1503 15/2000Ts 0.1*20/0.06 | T902 RB  |                   | 1    |
| 582  | N/A            | 2374301605P | XFORMER INVERTER 15/2000Ts 0.1*20/0.06 DARFON   | T901 RA  |                   | 1    |
| 583  | N/A            | 2374301605P | XFORMER INVERTER 15/2000Ts 0.1*20/0.06 DARFON   | T902 RA  |                   | 1    |

| Item | ViewSonic P/N  | Ref. P/N    | Description                                      | Location | Universal number# | Q'ty |
|------|----------------|-------------|--|----------|-------------------|------|
| 584  | E-L-0407-0041  | 2379101595P | FERRITE CORE 3.5*0.8*4.5                         | L801     |                   | 1    |
| 585  | N/A            | 2379103391P | FERRITE CORE 3.5*6*0.8x2 100MHZ=100ohm Min       | L607     |                   | 1    |
| 586  | E-L-0407-1606  | 2379103500P | FERRITE CORE 0.5 $\phi$ /3Ts 6*10                | L806     |                   | 1    |
| 587  | E-00003533     | 2379520196P | BEAD,HI-CURRENT Z= 200 ohm 0805 I=2.0A           | L101     |                   | 1    |
| 588  | E-00003533     | 2379520196P | BEAD,HI-CURRENT Z= 200 ohm 0805 I=2.0A           | L102     |                   | 1    |
| 589  | N/A            | 2379820196P | BEAD,HI-IMPEDANCE Z= 200 ohm(200MHZ~) 0805 200mA | L105     |                   | 1    |
| 590  | N/A            | 2379820196P | BEAD,HI-IMPEDANCE Z= 200 ohm(200MHZ~) 0805 200mA | L106     |                   | 1    |
| 591  | N/A            | 2379820196P | BEAD,HI-IMPEDANCE Z= 200 ohm(200MHZ~) 0805 200mA | L107     |                   | 1    |
| 592  | E-00008180     | 2391302501P | SPEAKER ASS'Y 2.5W/4ohm(R) L80*W29*H20 D.L       | W902     |                   | 1    |
| 593  | E-00008181     | 2391302502P | SPEAKER ASS'Y 2.5W/4ohm(L) L80*W29*H20 D.L       | W901     |                   | 1    |
| 594  | M-SW-0815-0182 | 2403702200P | TACT SWITCH TSAA-2 HUAJIE                        | S701     |                   | 1    |
| 595  | M-SW-0815-0182 | 2403702200P | TACT SWITCH TSAA-2 HUAJIE                        | S702     |                   | 1    |
| 596  | M-SW-0815-0182 | 2403702200P | TACT SWITCH TSAA-2 HUAJIE                        | S703     |                   | 1    |
| 597  | M-SW-0815-0182 | 2403702200P | TACT SWITCH TSAA-2 HUAJIE                        | S704     |                   | 1    |
| 598  | M-SW-0815-0182 | 2403702200P | TACT SWITCH TSAA-2 HUAJIE                        | S705     |                   | 1    |
| 599  | N/A            | 2404321230P | CONNECTOR CF10301D0T0 CVILUX                     | P104     |                   | 1    |
| 600  | N/A            | 2404371003P | CONNECTOR JST PH 4P TOP P=2.0 OR EQUAL           | P602     |                   | 1    |
| 601  | N/A            | 2404371008P | CONNECTOR JST PH 9P TOP P=2.0 OR EQUAL           | P101     |                   | 1    |
| 602  | N/A            | 2404371009P | CONNECTOR JST PH 10P TOP P=2.0 OR EQUAL          | P105     |                   | 1    |
| 603  | N/A            | 2404380302P | CONNECTOR 87210-0236 P=3.5 ACE OR EQUAL          | P901     |                   | 1    |
| 604  | N/A            | 2404380302P | CONNECTOR 87210-0236 P=3.5 ACE OR EQUAL          | P902     |                   | 1    |
| 605  | N/A            | 2404380302P | CONNECTOR 87210-0236 P=3.5 ACE OR EQUAL          | P903     |                   | 1    |
| 606  | N/A            | 2404380302P | CONNECTOR 87210-0236 P=3.5 ACE OR EQUAL          | P904     |                   | 1    |
| 607  | N/A            | 2404381101P | CONNECTOR 74320-4004 DVI-D MOLEX                 | P103 RA  |                   | 1    |
| 608  | N/A            | 2404381104P | CONNECTOR QH11121-FP0 DVI-D FOXCONN              | P103 RB  |                   | 1    |
| 609  | N/A            | 2404381106P | CONNECTOR 2DS-0341-001 DVI-D S.E                 | P103 RC  |                   | 1    |
| 610  | N/A            | 2404381107P | CONNECTOR CU072SAHDG DVI-D CVILUX                | P103 RD  |                   | 1    |
| 611  | N/A            | 2405106000P | EARPHONE JACK 2SJ-P520-A04 (577C) SINGATRON      | P601     |                   | 1    |
| 612  | N/A            | 2407200791P | HOLDER,FUSE FC-05C                               | S802 RB  |                   | 1    |
| 613  | N/A            | 2407200791P | HOLDER,FUSE FC-05C                               | S803 RB  |                   | 1    |
| 614  | N/A            | 2407200991P | HOLDER,FUSE CQ-05T CONQUER                       | S802 RA  |                   | 1    |
| 615  | N/A            | 2407200991P | HOLDER,FUSE CQ-05T CONQUER                       | S803 RA  |                   | 1    |
| 616  | N/A            | 2407413100P | SOCKET 0711-02-P10-9 INALWAYS                    | P801 RA  |                   | 1    |
| 617  | N/A            | 2407413300P | SOCKET SC-8R-F15A9 SUPERCOM                      | P801 RB  |                   | 1    |
| 618  | N/A            | 2407430900P | SOCKET DHSB-15FTF7 BLUE(661C) LEOCO              | P102     |                   | 1    |
| 619  | N/A            | 2420330181P | FFC CABLE 30P*P0.5*L157mm                        | P980     |                   | 1    |
| 620  | A-00006132     | 2427130097P | AC POWER CORD CHINA WALL 1.83M BLACK             | P951     |                   | 1    |
| 621  | A-00005362     | 2427130046P | AC POWER CORD USA WALL 1.83M BLACK               | P951     |                   | 1    |
| 622  | N/A            | 2427300043P | LUG W/WIRE OB 4.3/TIN 1007#24 L=40mm BLK         | P986     |                   | 1    |
| 623  | N/A            | 2427404032P | WIRE HARNESS 2+2/4P H/A 1007#24 L=250mm          | P603     |                   | 1    |
| 624  | N/A            | 2427409004P | WIRE HARNESS 9/9P H/B 1007#26 L=130mm            | P802     |                   | 1    |
| 625  | N/A            | 2427410008P | WIRE HARNESS 8/10P H/B 1007#26 L=280mm           | P701     |                   | 1    |
| 626  | CB-00005507    | 2427501195P | I/O CABLE D15/D15 20276(4.5) 1.83M BLACK         | P961     |                   | 1    |
| 627  | CB-00006182    | 2427501198P | I/O CABLE DVI-D*2 20276(6.0) 1.83M BLACK         | P971     |                   | 1    |
| 628  | CB-00005735    | 2427721841P | CABLE EAR 3.5(577C) 2547#28 1.8M BLK             | P962     |                   | 1    |
| 629  | M-WR-0828-0455 | 2428106050P | JUMPER $\phi$ 0.6*5.0mm                          | J803     |                   | 1    |
| 630  | N/A            | 2428106075P | JUMPER 0.6 $\phi$ *7.5mm                         | J904     |                   | 1    |
| 631  | N/A            | 2428106075P | JUMPER 0.6 $\phi$ *7.5mm                         | J905     |                   | 1    |
| 632  | N/A            | 2428106075P | JUMPER 0.6 $\phi$ *7.5mm                         | J906     |                   | 1    |
| 633  | N/A            | 2428106075P | JUMPER 0.6 $\phi$ *7.5mm                         | J907     |                   | 1    |
| 634  | N/A            | 2428106075P | JUMPER 0.6 $\phi$ *7.5mm                         | J908     |                   | 1    |
| 635  | N/A            | 2428106075P | JUMPER 0.6 $\phi$ *7.5mm                         | J910     |                   | 1    |
| 636  | N/A            | 2428106075P | JUMPER 0.6 $\phi$ *7.5mm                         | J911     |                   | 1    |
| 637  | N/A            | 2428106075P | JUMPER 0.6 $\phi$ *7.5mm                         | J912     |                   | 1    |
| 638  | N/A            | 2428106075P | JUMPER 0.6 $\phi$ *7.5mm                         | J913     |                   | 1    |
| 639  | N/A            | 2428106075P | JUMPER 0.6 $\phi$ *7.5mm                         | L803     |                   | 1    |
| 640  | N/A            | 2428106075P | JUMPER 0.6 $\phi$ *7.5mm                         | R910     |                   | 1    |
| 641  | N/A            | 2428106075P | JUMPER 0.6 $\phi$ *7.5mm                         | R928     |                   | 1    |
| 642  | N/A            | 2428106100P | JUMPER 0.6 $\phi$ *10.0mm                        | J801     |                   | 1    |
| 643  | N/A            | 2428106100P | JUMPER 0.6 $\phi$ *10.0mm                        | J802     |                   | 1    |
| 644  | N/A            | 2428106100P | JUMPER 0.6 $\phi$ *10.0mm                        | J901     |                   | 1    |
| 645  | N/A            | 2428106100P | JUMPER 0.6 $\phi$ *10.0mm                        | J902     |                   | 1    |
| 646  | N/A            | 2428106100P | JUMPER 0.6 $\phi$ *10.0mm                        | J909     |                   | 1    |
| 647  | N/A            | 2428106100P | JUMPER 0.6 $\phi$ *10.0mm                        | J915     |                   | 1    |
| 648  | N/A            | 2428106100P | JUMPER 0.6 $\phi$ *10.0mm                        | J916     |                   | 1    |
| 649  | N/A            | 2428106100P | JUMPER 0.6 $\phi$ *10.0mm                        | J917     |                   | 1    |
| 650  | N/A            | 2428106125P | JUMPER $\phi$ 0.6*12.5mm                         | F802     |                   | 1    |
| 651  | N/A            | 2428106125P | JUMPER $\phi$ 0.6*12.5mm                         | J903     |                   | 1    |
| 652  | N/A            | 2428106125P | JUMPER $\phi$ 0.6*12.5mm                         | L901     |                   | 1    |
| 653  | N/A            | 2428106125P | JUMPER $\phi$ 0.6*12.5mm                         | L902     |                   | 1    |
| 654  | N/A            | 2428106150P | JUMPER 0.6 $\phi$ *15.0mm                        | J804     |                   | 1    |
| 655  | N/A            | 2428106150P | JUMPER 0.6 $\phi$ *15.0mm                        | J805     |                   | 1    |
| 656  | N/A            | 2428106150P | JUMPER 0.6 $\phi$ *15.0mm                        | J914     |                   | 1    |
| 657  | N/A            | 2434325603P | SHIELDING TAPE W25*L60mm (AL)                    | K901     |                   | 1    |
| 658  | N/A            | 2434325603P | SHIELDING TAPE W25*L60mm (AL)                    | K902     |                   | 1    |
| 659  | N/A            | 2434325603P | SHIELDING TAPE W25*L60mm (AL)                    | K903     |                   | 1    |
| 660  | DC-00008155    | 2438501252P | CD-OWNER GUIDE VX2235WM-3 WIZARD VS11446 AUO     | 6P80     |                   | 1    |
| 661  | DC-00008109    | 2002310402P | GUARANT CARD VIEWSONIC WARRANTY CARD-C 2004      | 6P07     |                   | 1    |
| 662  | N/A            | 2056606025P | SERIAL LABEL VS CN WARRANTY CARD SN STICKER      | 6P08     |                   | 2    |
| 663  | N/A            | 2055613458P | LABEL VIEWSONIC 2005 3C LABEL ROHS               | 6P10     |                   | 1    |
| 664  | M-LB-0813-0863 | 2056606010P | SERIAL LABEL VIEWSONIC BOX STICKER-G             | 6P12     |                   | 1    |
| 665  | N/A            | 2056606009P | SERIAL LABEL VIEWSONIC SERVICE STICKER-G         | 6P15     |                   | 1    |

## **\* Reader's Response\***

Dear Readers:

Thank you in advance for your feedback on our Service Manual, which allows continuous improvement of our products. We would appreciate your completion of the Assessment Matrix below, for return to ViewSonic Corporation.

### **Assessment**

**A.** What do you think about the content of this Service Manual?

| <i>Unit</i>   | <i>Excellent</i> | <i>Good</i> | <i>Fair</i> | <i>Bad</i> |
|---|------------------|-------------|-------------|------------|
| <b>1. Precautions and Safety Notices</b>            |                  |             |             |            |
| <b>2. Specification</b>                             |                  |             |             |            |
| <b>3. Front Panel Function Control Description</b>  |                  |             |             |            |
| <b>4. Circuit Description</b>                       |                  |             |             |            |
| <b>5. Adjustment Procedure</b>                      |                  |             |             |            |
| <b>6. Troubleshooting Flow Chart</b>                |                  |             |             |            |
| <b>7. Block Diagrams</b>                            |                  |             |             |            |
| <b>8. Schematic Diagrams</b>                        |                  |             |             |            |
| <b>9. PCB Layout Diagrams</b>                       |                  |             |             |            |
| <b>10. Exploded Diagram and Exploded Parts List</b> |                  |             |             |            |
| <b>11. Recommended Spare Parts List</b>             |                  |             |             |            |

**B.** Are you satisfied with this Service Manual?

| <i>Item</i>                      | <i>Excellent</i> | <i>Good</i> | <i>Fair</i> | <i>Bad</i> |
|----------------------------------|------------------|-------------|-------------|------------|
| <b>1. Service Manual Content</b> |                  |             |             |            |
| <b>2. Service Manual Layout</b>  |                  |             |             |            |
| <b>3. The form and listing</b>   |                  |             |             |            |

**C.** Do you have any other opinions or suggestions regarding this service manual?

### **Reader's basic data:**

|                 |  |               |  |
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| <b>Company:</b> |  |               |  |
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